First, the record shows Sutton's mark is strong. Sutton's mark is conceptually strong because the United States Patent and Trademark Office (USPTO) did not require Sutton to prove the mark's secondary meaning. Sutton's mark is commercially strong because Sutton has continually used it for decades, earned $1.5 billion in sales in 2020, and advertises the mark extensively in the Super Bowl, mainstream media, and online.

Second, a reasonable jury could conclude that PerforMax intended to create consumer confusion. PerforMax admits it knew of Sutton's mark, the risk of consumer confusion, and ignored a cease-and-desist letter. Because PerforMax continued to use its mark despite such knowledge, PerforMax's intent is in genuine dispute.

Third, the record shows actual consumer confusion within a week of PerforMax's product being brought to market, and a reasonable inference regarding decreased sales suggests further confusion took place. The Fourth Circuit has consistently held that, at summary judgment, any instance of consumer confusion creates a genuine dispute of material fact. Thus, based on the record, summary judgment is inappropriate and should be denied.

Statement of Facts

Sutton's 125-year-old business has produced and sold its Nature's Choice dog food continuously since at least 1995. Marsh Dep. 4:5–6. Today, Sutton commands a forty-two percent share of the dog food market. Marsh Dep. 14:1. Sutton carries five different dog food brands, four of which are specialized to puppies or senior dogs; Nature's Choice is its highest-grossing dog food and is suitable for any adult dog. Marsh Dep. 4:1–3.

By issuing a federal trademark registration in 1995 without requiring Sutton to prove the mark's secondary meaning, the USPTO has recognized Sutton's ownership of—and exclusive right to use—the Nature's Choice trademark. Marsh Dep. 4:9–11. A trademark registration

search of "nature" pulls a total of 15,072 results, 1,060 of which are within the same agricultural classification as dog food. Czyzas Aff. Exs. B-C.

In December 2021, without Sutton's authorization, and despite Sutton's prior use and rights in the Nature's Choice trademark, PerforMax introduced a new adult dog food product that is marketed and sold as "Nature's Best." Nature's Choice and Nature's Best are both dog food brands that are sold in volumes of five, fifteen, and thirty-pound bags in Petco and PetSmart on the east coast. Marsh Dep. 4:17–25; Lee Dep. 8:16–17, 10:8–11. While consumers across the country purchase both products, Sutton sells exclusively to retailers and PerforMax offers it for sale on its own website. *Id.*

Both companies advertise extensively online and in print; Sutton alone spends $50 million each year on companywide advertising, marketing Nature's Choice in Super Bowl commercials, major magazines, primetime television, and online. Marsh Dep. 6:15–17, 7:10–12; Lee Dep. 5:6–9, 6:22–24. On both the Nature's Choice and Nature's Best packaging materials, "Nature's" is written in cursive with a line below it and precedes another single-syllable word in all caps. Lee Dep. 18:19–24, 19:1–5.

PerforMax has stated it does not want their consumers to confuse the two products, but nothing in the record shows that PerforMax does not want to confuse Sutton's consumers. Lee Dep. 19:16. PerforMax expressed concern about consumer confusion in an internal email and admits knowing that a "low-information" consumer might be confused if they are looking for dog food with the word "nature" in it. Lee Dep. 29:14–17, Ex. 3.

Consumer confusion did take place within a week of Nature's Best being introduced to market. De La Hoya Aff ¶ 6. A longtime Sutton customer, whose husband typically buys their family's dog food, visited Petco to purchase a bag of Nature's Choice. *Id.* When she arrived at

the store, she purchased PerforMax's dog food by mistake because she was looking for a brand name that began with the word "nature." *Id.*

PerforMax targets affluent consumers through premium ingredients and higher price. Lee Dep. 9:8–9, 11:3–5. However, PerforMax also targets a national audience through online sales and advertising and ships its product to consumers in all fifty states. Lee Dep. 6:22–24, 31:12–15. According to PerforMax, online sales and dog food spending have soared during the pandemic. Lee Dep. 17:13–16. At the same time, stores like Petco now display organic, premium-priced products like Nature's Best in a prominent area of the store, away from the "mass-manufacturing" section where Nature's Choice is sold. Scherago Aff. ¶ 6.

When Sutton learned of PerforMax's use of Nature's Best, it sent a letter to Mr. Peter J. Tarsney of PerforMax on December 20, 2021, and demanded that PerforMax cease-and-desist from all current and future use of Nature's Best products. Compl. Ex. D. PerforMax admits they received and ignored Sutton's letter and continued to use the Nature's Best mark. Lee Dep. Ex. 3; Lee Dep. 17:19–25, 18:1–9.

Nature's Choice's actual sales were off from what Sutton had projected for December. Marsh Dep. 8:12–16. In the same month, the dog food market as a whole continued to grow, and Sutton did not experience unusual supply chain delays. *Id.*

Sutton filed the Complaint in this case on February 13, 2022, and PerforMax provided its Answer on February 14, 2022. Following discovery, PerforMax filed a motion for summary judgment, to which this memorandum stands in opposition.

Summary Judgment Standard

The Federal Rules of Civil Procedure provide that summary judgment is only appropriate when "the movant shows that there is no genuine dispute as to any material fact and the movant

is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). A dispute is genuine when a reasonable jury could find in favor of the nonmovant, and a fact is material when it might affect the outcome of the case under the governing law. *Variety Stores, Inc. v. Wal-Mart Stores, Inc.*, 888 F.3d 651, 659 (4th Cir. 2018) (citing *Jacobs v. N.C. Admin. Office of the Courts*, 780 F.3d 562, 568 (4th Cir. 2015)). The test to be applied on a motion for summary judgment, then, is whether the pleadings and depositions, together with the affidavits, show no genuine issue as to any material fact such that the moving party is entitled to a judgment as a matter of law. *Tunstall v. Brotherhood of Locomotive Firemen*, 69 F. Supp. 826 (E.D. Va. 1946), *aff'd*, 163 F.2d 289 (4th Cir. 1947); *Sherman v. City of Richmond*, 543 F. Supp. 447 (E.D. Va. 1982); *Long v. First Union*, 894 F. Supp. 933 (E.D. Va. 1995), *aff'd*, 86 F.3d 1151 (4th Cir. 1996). The party moving for summary judgment bears the burden of demonstrating the basis for its motion and identifying specific parts of the record that show the absence of a genuine issue of material fact. Fed. R. Civ. P. 56(c).

When reviewing a motion for summary judgment, the nonmovant's evidence must be taken as true. *Anderson v. Liberty Lobby Inc.*, 477 U.S. 242, 248-49 (1986). Further, at summary judgment, a court should not weigh the evidence on the merits or determine the credibility of any facts within the record. *Variety Stores*, 888 F.3d at 659 (citing *Lee v. Town of Seaboard*, 863 F.3d 323, 327 (4th Cir. 2017)). Instead, the court should view the evidence in the light most favorable to the party opposing the summary judgment motion and draw all reasonable inferences in that party's favor. *George & Co. LLC v. Imagination Entertainment Ltd.*, 575 F.3d 383, 392 (4th Cir. 2009). The court's role at summary judgment is not to determine the truth of the matter. *Rosetta Stone Ltd. v. Google, Inc.*, 676 F.3d 144, 160 (4th Cir. 2012) (reversing the district court's grant of summary judgment for defendant on plaintiff's trademark infringement

claims). Rather, the court should determine whether the evidence of record would allow a reasonable jury to find in favor of the nonmovant. *Anderson*, 477 U.S. at 248-49.

This Circuit has recognized that a trademark infringement claim often warrants a denial of summary judgment, because "the jury, which represents a cross-section of consumers, is well-suited to evaluating whether an 'ordinary consumer' would likely be confused." *Anheuser-Busch, Inc. v. L & L Wings, Inc.*, 962 F.2d 316, 318 (4th Cir. 1992); *see also Gov't Emps. Ins. Co. v. Google, Inc.*, 2005 U.S. Dist. LEXIS 18642, at *2 n.1 (E.D. Va. Aug 8, 2005) (denying defendant's motion for summary judgment on a likelihood of confusion case, "because such a highly factual question is inappropriate for resolution on summary judgment."). Given this standard, and because a jury could find in favor of Sutton on likelihood of confusion, Sutton asks this Court to deny summary judgment.

Argument

I. Summary judgment should be denied because the record shows a jury could find PerforMax's mark creates a likelihood of confusion.

To show trademark infringement under the Lanham Act, a plaintiff must prove that (1) it owns a valid mark; (2) the defendant used the mark without the plaintiff's authorization; (3) the defendant used the mark for the sale, distribution, or advertising of goods or services; and (4) the defendant's use of the mark is likely to confuse consumers. *Rosetta Stone*, 676 F.3d at 152; 15 U.S.C. §§ 1114(a), 1125(a). Under the Lanham Act, a USPTO certificate of registration provides prima facie evidence that the registered mark is valid and owned by the registrant with exclusive rights of use. *Retail Servs. Inc. v. Freebies Publ'g*, 364 F.3d 535, 542 (4th Cir. 2004) (citing 15 U.S.C. § 1057(b) (West 1997)).

To show a likelihood of confusion, a plaintiff must prove that the defendant's use of the plaintiff's trademark is likely to confuse an ordinary consumer regarding the origin or affiliation

of the goods. *People for the Ethical Treatment of Animals v. Doughney*, 263 F.3d 359, 366 (4th Cir. 2001); *CareFirst of Maryland, Inc. v. First Care, P.C.*, 434 F.3d 263, 267 (4th Cir. 2006). In the Fourth Circuit, likelihood of confusion is a fact-intensive test with a nine-factor analysis: (1) the conceptual and commercial strength of the plaintiff's mark in its marketplace; (2) similarity of the two marks; (3) similarity of the goods or services; (4) similarity of facilities used to market and sell the products; (5) similarity of advertising; (6) the defendant's intent; (7) actual confusion; (8) the quality of the defendant's product; and (9) sophistication of the consuming public. *Variety Stores*, 888 F.3d at 660; *Rosetta Stone*, 676 F.3d at 153; Lanham Trade-Mark Act § 32, 15 U.S.C.A. § 1114(1)(a).

Not all of the factors used in the likelihood of confusion analysis will be relevant in every trademark dispute, and each factor need not support the plaintiff's position. *George & Co.*, 575 F.3d at 393; *Variety Stores*, 888 F.3d at 660; *Synergistic Int'l, L.L.C. v. Korman*, 470 F.3d 162, 171 (4th Cir. 2006). The Fourth Circuit weighs the strength of the mark (factor one), intent (factor six), and actual confusion (factor seven) most heavily in a likelihood of confusion analysis. *Variety Stores*, 888 F.3d at 666; *Pizzeria Uno Corp. v. Temple*, 747 F.2d 1522, 1527 (4th Cir. 1984) (holding strength of mark is "paramount" to determine likelihood of confusion); *CareFirst*, 434 F.3d at 268 (finding actual confusion is often of "critical importance" in a likelihood of confusion analysis); *George & Co.*, 575 F.3d at 400 ("[W]e are aware of no case where a court has allowed a trademark infringement action to proceed beyond summary judgment where two weak marks were dissimilar, there was no showing of a predatory intent, and the evidence of actual confusion was de minimis.").

A reasonable jury could find in favor of Sutton on the Fourth Circuit's three most important factors: strength of mark, intent, and actual confusion. Strength of mark (factor one)

favors Sutton because the USPTO did not require proof of secondary meaning and because Nature's Choice has been continually used since 1995 with substantial sales and advertising expenditures. Intent (factor six) could favor Sutton because PerforMax had knowledge of Sutton's mark, the potential for consumer confusion, and Sutton's cease-and-desist letter. Actual confusion (factor seven) favors Sutton because a consumer was confused within a week of PerforMax bringing Nature's Best to market, and a reasonable inference regarding a decrease in sales suggests further confusion took place.

A reasonable jury could also find the other factors either weigh in favor of Sutton or are irrelevant to this case. The marks are similar (factor two) because they use the same dominant term, incorporate a similar design, and the words are synonymous. Likewise, the facilities (factor four) used by Sutton and PerforMax are similar because of some overlap in their target markets. Further, the two marks' advertising is similar (factor five) because both Sutton and PerforMax advertise them online and in print to a national audience. Additionally, Nature's Best and Nature's Choice are indisputably similar goods (factor three) because both products are dry adult dog food. The Fourth Circuit usually only takes the quality of defendant's product (factor eight) into consideration when it is a cheap imitation. However, because the higher price of Nature's Best gives it a more prominent placement in stores than Nature's Choice, a jury could infer the quality of PerforMax's product is relevant to show it intended to generate underserved sales. Finally, courts find consumer sophistication (factor nine) irrelevant when the product is purchased by ordinary consumers, as is the case here.

On balance, a reasonable jury could find in favor of Sutton in a likelihood of confusion analysis. Therefore, the defendant's motion for summary judgment should be denied.

A. Factor one: Sutton's mark is strong on the basis of the USPTO's judgment and because consumers associate the mark with Sutton.

Nature's Choice is a strong mark. A mark is strong if it has both conceptual and commercial strength. *Grayson O Company v. Agadir International, LLC,* 856 F.3d 307, 315 (4th Cir. 2017) (citing *Pizzeria Uno,* 747 F.2d at 1527); *George & Co.*, 575 F.3d at 393. A mark's conceptual strength is based on the distinctiveness of its visual appearance in the context of the product sold. *Perini Corp. v. Perini Const., Inc.*, 915 F.2d 121, 125 (4th Cir. 1990). Distinctiveness is defined by four categories: (1) generic; (2) descriptive; (3) suggestive; or (4) fanciful. *Grayson O,* 856 F.3d at 315 (citing *George & Co.,* 575 F.3d at 393-94). Suggestive marks generally require some consumer imagination to associate the mark with the product, while descriptive marks characterize the product. *Pizzeria Uno,* 747 F.2d at 1528 (citing *Soweco, Inc. v. Shell Oil Co.,* 617 F.2d 1178, 1183 (5th Cir. 1980)). Because suggestive and fanciful marks are strong, courts afford them the greatest protection against trademark infringement. *Sara Lee Corp. v. Kayser-Roth Corp.,* 81 F.3d 455, 466 (4th Cir. 1996). The Fourth Circuit finds a mark is prima facie suggestive when the USPTO does not require proof of secondary meaning, because the USPTO will not register generic or descriptive marks if they lack secondary meaning. *Retail Servs.*, 364 F.3d at 538.

A court will find a mark's commercial strength is more important than conceptual strength when consumers associate the mark with a particular business. *See Renaissance Greeting Cards, Inc. v. Dollar Tree Stores, Inc.*, 405 F. Supp. 2d 680, 690-91 (E.D. Va. 2005); *CareFirst,* 434 F.3d at 269; *Grayson O,* 856 F.3d at 315. The Fourth Circuit measures commercial strength by weighing the following factors: (1) the plaintiff's advertising expenditures; (2) consumer studies linking the mark to a source; (3) the plaintiff's record of sales success; (4) unsolicited media coverage of the plaintiff's business; (5) attempts to plagiarize the

mark; and (5) the length and exclusivity of the plaintiff's use of the mark. *Perini*, 915 F.2d at 125. Not all factors are relevant in every commercial strength analysis, and each factor need not support the plaintiff. *See id.*

Sutton's mark has conceptual and commercial strength. Sutton's mark is conceptually strong because the USPTO did not require proof of secondary meaning to register the trademark, and because the Nature's Choice mark does not characterize dog food. Sutton's mark is commercially strong because Sutton has continually used it since 1995, earned $1.5 billion in sales in 2020, and advertises the mark in major magazines, primetime television, and online. Therefore, a jury could find factor one favors Sutton and summary judgment should be denied.

1. Sutton's mark is conceptually strong because the USPTO did not require proof of secondary meaning to register the mark.

Sutton's mark is conceptually strong. In the Fourth Circuit, a mark is presumed conceptually strong when the USPTO does not require separate proof of secondary meaning to register the mark. *America Online, Inc. v. AT&T Corp.*, 243 F.3d 812, 818 (4th Cir. 2001); *Retail Servs.*, 364 F.3d at 543. While a mark's frequency of use in the same industry can signal conceptual weakness, at summary judgment the Fourth Circuit consistently finds frequency of use is not enough to overcome the presumptive strength of the USPTO's judgment. *CareFirst*, 434 F.3d at 269-70; *America Online*, 243 F.3d at 818; *see also RFE Indus., Inc. v. SPM Corp.*, 105 F.3d 923, 926 (4th Cir. 1997) (holding that, at summary judgment, "a district court should not freely substitute its opinion for that of the [US]PTO because a decision to register a mark, without requiring evidence of secondary meaning, is powerful evidence that the registered mark is suggestive and not merely descriptive").

The USPTO will not register a generic or descriptive mark without evidence of secondary meaning; when the USPTO does not require such evidence, a court will presume the mark is

suggestive or fanciful and thus inherently distinctive. *RFE Indus.*, 105 F.3d at 926 (finding USPTO will not register descriptive marks without inherent or explicit proof of secondary meaning); *Pizzeria Uno*, 747 F.2d at 1528. Suggestive marks generally require some consumer imagination to associate the dominant term of the mark with the product, while descriptive marks merely characterize the product. *Id.* (citing *Soweco*, 617 F.2d at 1183). Suggestive marks are distinctive, and a mark that is distinctive is entitled to the full weight of trademark protection. *Retail Servs.*, 364 F.3d at 538.

At summary judgment, conceptual strength favors the plaintiff when the USPTO does not require proof of secondary meaning, or when some imagination is required for consumers to associate the mark with the product. *Pizzeria Uno*, 747 F.2d at 1528. In *Pizzeria Uno v. Temple*, the USPTO did not require proof of secondary meaning when the plaintiff's mark was registered. *Id.* at 1524. The court also found that the dominant term of the plaintiff's mark—"Uno"—did not characterize food, and thus required some imagination from consumers. *Id.* at 1528. While the court also cited the mark's infrequent use as supportive of conceptual strength, it entitled the USPTO's judgment as presumptive evidence that the mark was suggestive. *Id.* at 1533. Thus, the court held the mark had presumptive conceptual strength unless the defendant could prove the USPTO was inaccurate in its judgment. *Id.* at 1534.

Sutton's mark has conceptual strength because the mark is suggestive, and Sutton's mark is suggestive rather than descriptive for three reasons. First, like the plaintiff in *Pizzeria Uno*, the USPTO did not require Sutton to show proof of secondary meaning to register its mark. Marsh Dep. 4:9–11. Second, just as dominant term of the plaintiff's mark in *Pizzeria Uno* did not characterize food and thus required consumer imagination, the dominant term of Sutton's mark—"Nature"—does not characterize dog food and thus requires consumer imagination.

Third, in *Pizzeria Uno*, the dominant term of the plaintiff's mark was not used frequently in the restaurant industry. Comparably, the record does not show that the term "nature" is used frequently in the dog food industry. Czyzas Aff. Ex. C. Since the court in *Pizzeria Uno* held the burden is on the defendant to overcome the presumptive strength of the USPTO's judgment, a jury here could find PerforMax did not meet that burden. Thus, the USPTO's judgment on secondary meaning, combined with the need for consumer imagination, shows Sutton's mark is suggestive and conceptually strong.

2. Nature's Choice has commercial strength because Sutton has continually used the mark since 1995, had $1.5 billion in sales in 2020, and advertises in mainstream media.

Sutton's mark is commercially strong. When analyzing commercial strength, the Fourth Circuit emphasizes advertising expenditures, sales success, and the length and exclusivity of the plaintiff's use of the mark. *Perini*, 915 F.2d at 125; *see also Synergistic*, 470 F.3d at 174 (holding plaintiff's mark commercially strong because of substantial national advertising); *Bridgestone Ams. Tire Operations, LLC v. Federal Corp.*, 673 F.3d 1330, 1336 (Fed. Cir. 2012) (holding plaintiff's mark commercially strong because of extended use, substantial advertising, and billions in sales). Such factors can be undermined by evidence of extensive third-party use in the same industry. *See CareFirst*, 434 F.3d at 270. However, even with evidence of extensive third-party use, this Circuit puts commercial strength in genuine dispute if the plaintiff can also show some evidence of the mark's sales success, advertising expenditures, and length of use. *Variety Stores*, 888 F.3d at 663-64. Further, when a company concurrently uses its name alongside the product mark on packaging and in advertising, the mark's strength is not diminished. *Bridgestone*, 673 F.3d at 1336 (holding that the plaintiff's concurrent use of the "Bridgestone" name does not diminish the strength of their "Potenza" and "Turanza" marks); *Bose Corp. v.*

QSC Audio Prods., Inc., 293 F.3d 1367, 1375 (Fed. Cir. 2002) (holding the disputed marks have strength independent from the plaintiff's company name).

Commercial strength is considered to be in genuine dispute if the plaintiff used the mark for a long time with substantial sales and advertising expenditures, regardless of extensive third-party use. *Variety Stores*, 888 F.3d at 663-64. In *Variety Stores v. Wal-Mart*, the plaintiff earned more than fifty-six million in sales from products bearing its marks, spent millions of dollars in advertising, and used its mark in the marketplace for decades. *Id.* at 658. The court concluded that such evidence could show the mark's commercial strength, despite extensive third-party use. *Id.* at 664. Thus, the court held commercial strength was genuinely disputed and that a jury could find in favor of the plaintiff. *Id.*

A company's concurrent use of their name and the product mark on packaging and in advertising does not diminish the mark's commercial strength. *Bridgestone*, 673 F.3d at 1336. In *Bridgestone v. Federal*, the plaintiff advertised and sold tires featuring a product-specific mark as well as the company name. *Id.* The court concluded that the strength of a mark should be weighed separately from the company's name when both are identified on the branded product. *Id.* Since the plaintiff used the product-specific mark for many years, with billions of dollars in sales and extensive advertising in that time, the court held that the mark had independent commercial strength. *Id.*

A jury could find Sutton's mark is commercially strong regardless of any third-party use. Like the plaintiff in *Variety Stores*, the record shows third parties use the term "nature." Czyzas Aff. Ex. B. The plaintiff in *Variety Stores* maintained its mark's use for decades, earned millions in sales, and spent millions on advertising. Comparably, Sutton has continually used its mark since 1995, earned $1.5 billion in sales in 2020, and advertises the product in the Super Bowl,

major magazines, primetime television, as well as online. Marsh Dep. 3:4–6, 6:7–9, 11:11–12. Thus, just as the court in *Variety Stores* concluded a reasonable jury could find the plaintiff's mark had commercial strength despite third-party use, here a reasonable jury could conclude the same in favor of Sutton.

Sutton's concurrent use of its name and product mark on packaging and in advertising does not diminish the independent commercial strength of their product mark. Like the plaintiff in *Bridgestone*, Sutton's company name is identified alongside the Nature's Choice mark. Compl. Ex. B. Further, like the plaintiff in *Bridgestone*, Sutton has used its product mark for many years with billions in sales and extensive advertising. Marsh Dep. 3:4–6, 6:7–9, 11:11–12. Thus, a reasonable jury could infer that Sutton's concurrent use of their company name has no bearing on the commercial strength or sales success of the Nature's Choice mark. When considering the evidence of commercial strength in the light most favorable to Sutton, a jury could find Nature's Choice has commercial strength. Thus, summary judgment is inappropriate.

Taking the evidence of conceptual and commercial strength together, a jury could find Sutton's mark is strong. Therefore, summary judgment should be denied.

B. Factor two: Nature's Best and Nature's Choice are similar because the dominant term is identical, and the marks use a similar design.

Nature's Best and Nature's Choice are similar marks. The Fourth Circuit considers the appearance, sound, and meaning of the mark's dominant term to determine whether the marks are similar. *See Pizzeria Uno*, 747 F.2d at 1534-35 (finding "Uno," the dominant term of both marks, was similar in "appearance," "sound," and "meaning"); *George & Co.*, 575 F.3d at 396 (holding the court must focus on the dominant term of the mark). This Court has held that the marks are similar when the dominant terms overlap, even if the other parts of the mark are dissimilar. *Select Auto Imports Inc. v. Yates Select Auto Sales, LLC*, 195 F. Supp. 3d 818, 835

(E.D. Va. 2016). Moreover, an identical dominant term is strong evidence that the appearance and sound of the marks are similar enough to confuse consumers. *Pizzeria Uno,* 747 F.2d at 1534. Even where evidence of similarity in sound and meaning are lacking, the marks need only be similar in appearance. *Lone Star Steakhouse & Saloon, Inc. v. Lone Star Grill,* 43 F.3d 922, 936 (4th Cir. 1995) (citing *Pizzeria Uno*, 747 F.2d at 1529-30, 1534-35).

The two marks are similar because the dominant term is identical and their appearances overlap. On both marks, "Nature's" is written in cursive with a line below the first part of the term, followed by a single-syllable word in all caps. Lee Dep. 18:19–24, 19:1–5. Further, the two marks are similar in sound because the first word is identical, and the second word is a single syllable. Lastly, the meaning is similar because the "choice" of nature and the "best" of nature are synonymous, evidenced by PerforMax's concern over email that the two marks could confuse consumers. Lee Dep. Ex. 3. Thus, when considering the evidence of similarity of marks in the light most favorable to Sutton, summary judgment should be denied because a reasonable jury could find the two marks are similar.

C. Factor three: Nature's Choice and Nature's Best are similar goods because both are dry dog food sold in five, fifteen, and thirty-pound bags.

Nature's Choice and Nature's Best are indisputably similar goods. Goods need only be related for factor three to favor the plaintiff. *See Lone Star*, 43 F.3d at 936; *Pizzeria Uno*, 747 F.2d at 1535 (holding factor three favors the plaintiff when the "companies serve the same purpose"); *Commc'ns Satellite Corp. v. Comeet. Inc.*, 429 F.2d 1245, 1252 (4th Cir. 1970) (finding likelihood of confusion between "COMSAT" for communications services and "COMCET" for computer goods). Both products are similar because they are both dry adult dog food sold in the same five, fifteen, and thirty-pound bags. Lee Dep. 8:16–17, 24–25; Marsh Dep.

3:13–14, 4:1, 5:9–10. Because a jury will likely find the two marks are similar, summary judgment is therefore inappropriate.

D. Factor four: The facilities are similar because the parties both sell to Petco and PetSmart on the east coast and to consumers across the country.

A reasonable jury could find that the facilities for both products are similar. The similarity of facilities is in genuine dispute when the parties are direct competitors in overlapping geographical markets. *Variety Stores*, 888 F.3d at 664-65. A company's exact method of distributing the product is only important if it influences the end consumer's decision to make the purchase. *See Amstar Corporation v. Domino's Pizza, Inc.*, 615 F.2d 252, 262 (5th Cir. 1980) (holding the parties' differing methods of distributing the product—direct to consumer versus direct to retailer—was only significant because the restaurant consumers did not choose or purchase the plaintiff's sugar packets).

Sutton and PerforMax use similar facilities for Nature's Choice and Nature's Best. Both parties are direct competitors selling dog food to consumers across the country, as well as in Petco and PetSmart on the east coast. Marsh Dep. 4:17–25; Lee Dep. 10:8–11. That Sutton and PerforMax differ in their methods of distributing dog food—direct to consumer versus direct to retailer—is unimportant because consumers still choose and purchase dog food from both companies. Marsh Dep. 4:17–25; Lee Dep. 8:16–17, 10:8–11. Because a reasonable jury will likely find the facilities are similar, factor four weighs in favor of denying summary judgment.

E. Factor five: Advertising is similar because the parties both advertise the marks online and in print to a national audience.

Nature's Best and Nature's Choice advertising are similar enough to raise a genuine dispute of material fact. This Court has held that a similarity of advertising only requires "some degree of overlap" between the advertising channels and consumer targets, and they need not be

identical. *Select Auto*, 195 F. Supp. 3d at 837 (citing *Frehling Enters., Inc. v. Int'l Select Grp., Inc.*, 192 F.3d 1330, 1339 (11th Cir. 1999)). Advertising to a specialized demographic is only dissimilar from a broader demographic when the narrower audience is localized. *See Amstar*, 615 F.2d at 262 (holding defendant's audience of male college students was dissimilar from the plaintiff's national audience); *Petro Stopping, L.P. v. James River Petroleum, Inc.*, 130 F.3d 88, 95 (4th Cir. 1997). Similarity in consumer targets need not be based on demographics if the consumers are in the same geographic area. *See Select Auto*, 195 F. Supp. 3d at 837 (citing *Pizzeria Uno*, 747 F.2d at 1535); *Fuel Clothing Co. v. Nike, Inc.*, 7 F. Supp. 3d 594, 619 (D.S.C. 2014).

Advertising is similar when at least some degree of overlap exists between the product's advertising channels. *Select Auto*, 195 F. Supp. 3d at 837. In *Select Auto Imports v. Yates Select Auto Sales*, the plaintiff, unlike the defendant, advertised on radio, television, and physical signs. *Id.* at 827. However, the court found there was enough overlap because both parties advertised on their websites, social media, store signage, and merchandise. *Id.* at 837. Thus, the court held similarity of advertising weighed in favor of the plaintiff. *Id.*

Advertising to a specialized demographic is only dissimilar from advertising to a broader demographic when the former is based on a specific locality with no overlap in audience or channels. *Petro Stopping*, 130 F.3d at 95. In *Petro Stopping*, the plaintiff advertised to a broad demographic on radio, billboards, and highway exit signs, while the defendant targeted local newsletters. *Id.* The court concluded there was no overlap in the target audience or channels used because the defendant's advertising was based entirely on one locality. *Id.* Thus, the Fourth Circuit supported the lower court's finding that there was no similarity of advertising. *Id.*

A jury could find the advertising channels used by Sutton and PerforMax are similar because both companies advertise online and in print. Marsh Dep. 6:15–17, 7:10–12; Lee Dep. 5:6–9 , 6:22–24. Like the parties in *Select Auto*, Sutton advertises on television whereas the PerforMax does not. *Id.* Additionally, like the parties in *Select Auto*, PerforMax and Sutton both advertise online. *Id.* Just as the court found a partial overlap was enough to show similarity of advertising, here a reasonable jury could conclude the same.

A jury could also distinguish this case from *Petro Stopping* because both companies target a national audience. Marsh Dep. 4:17–25; Lee Dep. 8:16–17, 10:8–11. Like the parties in *Petro Stopping*, PerforMax targets a more specialized demographic than Sutton. Lee Dep. 9:8–9, 11:3–5. However, unlike the parties in *Petro Stopping*, both PerforMax and Sutton advertise nationally on their websites, online, and in print magazines. Lee Dep. 6:22–24, 31:12–15. Since the court in *Petro Stopping* only concluded advertising was dissimilar because there was no overlap in audience or channels, here a jury could conclude that the advertising is similar because there is an overlap in audience and channels. Thus, the record presents a genuine dispute over whether the factor five favors Sutton, and summary judgment is inappropriate.

F. Factor six: A jury could find PerforMax intended to confuse consumers because they continued to use the Nature's Best mark despite knowledge of Sutton's mark, the risk of confusion, and the cease-and-desist letter.

PerforMax's intent to confuse consumers is in genuine dispute. Prior knowledge of the plaintiff's mark creates an inference of intent. *See Variety Stores*, 888 F.3d at 665; *Star Indus., Inc. v. Bacardi & Co. Ltd.*, 412 F.3d 373, 389 (2d Cir. 2005) (holding bad faith is inferred by actual or constructive knowledge of the mark); *Teaching Co. Ltd. P'ship v. Unapix Entm't, Inc.*, 87 F. Supp. 2d 567, 582-83 (E.D. Va. 2000). Further, a defendant's continued use of the mark after the plaintiff sends a cease-and-desist letter provides additional evidence to support intent.

Lone Star, 43 F.3d at 937; *Select Auto*, 195 F. Supp. 3d at 837-38; *see also W.W.W. Pharm. Co. v. Gillette Co.*, 984 F.2d 567, 575 (2d Cir. 1993) (finding the absence of additional evidence beyond knowledge can support good faith). Intent to confuse consumers provides strong evidence that the infringing mark is a deliberate attempt to confuse consumers for the purpose of profiting from another business's reputation. *Pizzeria Uno*, 747 F.2d at 1535. When a defendant does not investigate possibly infringing marks or disregards legal advice, intent favors the plaintiff. *Variety Stores*, 888 F.3d at 665 (finding intent was genuinely disputed because, although plaintiff was not a major competitor, defendant disregarded the advice of counsel concerning the infringing mark).

Intent is inferred when the defendant had knowledge of the plaintiff's mark and continued to use the mark after receiving a cease-and-desist letter. *Select Auto*, 195 F. Supp. 3d at 837-38. In *Select Auto Imports v. Yates Select Auto Sales*, the plaintiff dealership used and advertised its registered mark for decades before the defendant, with prior knowledge of the plaintiff's mark, entered the market. *Id.* at 824-25. The defendant received and ignored plaintiff's cease-and-desist letter, then proceeded to use the mark in its own dealership. *Id.* at 826. Because the defendant used the mark despite knowledge of potential infringement, the court concluded there was strong evidence of bad faith and intent to confuse consumers for the purpose of profiting from the plaintiff's reputation. *Id.* at 838. Thus, the court held that factor six weighed in favor of the plaintiff. *Id.*

A jury could find PerforMax intended to confuse consumers because they knew about Sutton's mark and continued to use the Nature's Best mark after receiving Sutton's cease-and-desist letter. Lee Dep. Ex. 3, 17:19–25, 18:1–9. Like the plaintiff in *Select Auto*, Sutton used and advertised its registered mark for decades. Marsh Dep. 4:5–6. Moreover, like the defendant in

Select Auto, PerforMax had prior knowledge of Sutton's mark and continued to use the Nature's Best mark after Sutton sent a cease-and-desist letter. Lee Dep. Ex. 3, 17:19–25, 18:1–9. Further, while the record suggests PerforMax did not want their consumers to confuse the two products, nothing in the record shows PerforMax did not want to confuse Sutton's consumers. Lee Dep. 19:16, 29:14–17. In fact, PerforMax admits knowing that a "low-information" consumer might be confused if they are looking for dog food with the word "Nature" in it—as was the case with Ms. De La Hoya. De La Hoya Aff. ¶ 6. Because the court in *Select Auto* found in favor of the plaintiff on intent based on the defendant's prior knowledge and continued use of the mark, a reasonable jury could find the same in this case. Thus, summary judgment should be denied.

G. Factor seven: A jury could find PerforMax caused actual confusion because a consumer was confused within a week of Nature's Best being brought to market, and a reasonable inference suggests further instances of confusion.

A jury could find in favor of Sutton on actual consumer confusion. The Fourth Circuit has held that any evidence of actual confusion could lead a jury to find a likelihood of confusion. *Tools USA v. Champ Frame Straightening*, 87 F.3d 654, 661 (4th Cir. 1996) (citing *John H. Harland Co. v. Clarke Checks, Inc.*, 711 F.2d 966, 978-79 (11th Cir. 1983) (holding plaintiff's evidence of only two instances of actual confusion meant "the jury reasonably could have inferred" likelihood of confusion even if "the evidence . . . was not sufficient to compel" such a finding)). However, evidence of actual confusion is not necessary to prove likelihood of confusion because the Lanham Act is designed to protect consumers before confusion begins. *See Variety Stores*, 888 F.3d at 666; *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 163-164 (1995). A lack of evidence of actual confusion is de minimis when the plaintiff is a substantial actor and a long period of time has passed, or less than 10% of surveyed consumers are confused. *See George & Co.*, 575 F.3d at 400; *Petro Stopping*, 130 F.3d at 95; *Sara Lee*, 81 F.3d

at 467 n.15 (finding actual confusion can be supported by survey evidence showing confusion in 10% or more of consumers). Actual confusion need not be shown through survey evidence; anecdotal evidence is sufficient. *RXD Media, LLC v. IP Application Dev. LLC*, 986 F.3d 361, 372 (4th Cir. 2021); *Sara Lee*, 81 F.3d at 466-67 (finding the testimony of six consumers provided "nearly overwhelming" proof of actual confusion).

Whether a few instances of actual confusion are de minimis is a question to be determined at trial, not at summary judgment. *See Petro Stopping*, 130 F.3d at 95. In *Petro Stopping v. James River Petroleum*, the plaintiff and defendant both operated fueling stations. *Id.* at 90-91. The plaintiff earned more than two billion in sales over the preceding five years and filed suit four years after the defendant began using its mark in the marketplace. *Id.* at 91. At trial, the plaintiff could not produce more than a few instances of evidence of actual confusion. *Id.* at 95. On appeal, the court found that because a long time had passed, and because the plaintiff had a large market share comparative to the number of confused consumers, the evidence was at best "de minimis" and at worst weighed against the plaintiff. *Id.* Thus, the court held on the merits of the evidence that factor seven did not favor the plaintiff. *Id.*

Actual confusion favors Sutton because consumer confusion took place within a week of Nature's Best being brought to market. De La Hoya Aff. ¶ 6. While both the plaintiff in *Petro Stopping* and Sutton earned billions in sales, a jury could distinguish this case from *Petro Stopping* for two reasons. First, the court in *Petro Stopping* found actual confusion was de minimis because the plaintiff filed suit four years after the defendant's product was first sold. On the other hand, Sutton filed its Complaint within mere months of Nature's Best being sold. Compl. ¶ 1. Second, the court in *Petro Stopping* weighed factor seven on the merits of the evidence, not on a motion of summary judgment. Thus, the "de minimis" rule set forth in *Petro*

Stopping does not overcome Fourth Circuit precedent that, at summary judgment, any anecdotal evidence of consumer confusion creates a genuine dispute of material fact.

Further, a reasonable inference regarding a decrease in sales suggests further confusion took place, and at summary judgment reasonable inferences must be drawn in favor of the plaintiff. The record shows that Nature's Choice's actual sales were off from what Sutton had projected for December. Marsh Dep. 8:12–16. Given that PerforMax brought Nature's Best to market in December, the dog food market as a whole continued to grow, and Sutton experienced no unusual supply chain issues, a reasonable jury could infer consumer confusion led to the unexpected decrease in sales. *Id.* Therefore, when considering the evidence of actual confusion in the light most favorable to Sutton, factor seven is in genuine dispute and warrants denial of summary judgment.

H. Factor eight: The quality of Nature's Best is either irrelevant because the product more expensive, or indicative of an intent to generate undeserved sales because pandemic consumers are willing to spend more on dog food.

The relevance of quality in this case is in genuine dispute. The quality of the defendant's product is important when it shows the defendant intended to generate "undeserved sales." *Sara Lee*, 81 F.3d at 467. The Fourth Circuit has held this factor is most relevant when the defendant has produced a "cheap imitation" of the plaintiff's product. *Id.*; *Valador, Inc. v. HTC Corporation*, 241 F. Supp. 3d 650, 670 (E.D. Va. 2017) (citing *George & Co.*, 575 F.3d at 399).

A jury could find the premium ingredients and higher price of Nature's Best is relevant because Petco displays such products in a separate, more prominent part of the store than products like Nature's Choice. Scherago Aff. ¶ 6. PerforMax admits consumers have increased their online spending, "health aware[ness]," and willingness to spend on dog food during the pandemic. Lee Dep. 17:13–16. Sutton likewise acknowledges that consumers are "numb to

sticker shock" in light of current inflation. Marsh Dep. 5:20–22. Taken together, a reasonable jury could infer that consumers who are numb to price are more likely to mistakenly purchase Nature's Best, especially when prominently displayed by Petco. Thus, drawing reasonable inferences in favor of Sutton, a jury could find the quality of Nature's Best underlies PerforMax's intent to generate undeserved sales.

I. Factor nine: Consumer sophistication is irrelevant in this case because dog food is purchased by ordinary consumers of the general public.

The consuming public in this case is not sophisticated. Courts have held that consumers of pet goods are likely to be confused when the products are inexpensive and require no more than ordinary care to purchase. *Midwestern Pet Foods, Inc. v. Societe des Produits Nestle S.A.*, 685 F.3d 1046, 1053 (Fed. Cir. 2012); *see also Bath & Body Works Brand Mgmt., Inc. v. Summit Ent., LLC*, 7 F. Supp. 3d 385, 398 (S.D.N.Y. 2014) (finding the price of the product and whether a consumer is "subject to impulse" are relevant to consumer sophistication).

While some of PerforMax's consumers may elect to take more than ordinary care in buying dog food, they are still purchasing a product that requires no more than ordinary care. As evidenced by Ms. De La Hoya, consumers of both Nature's Best and Nature's Choice may buy their dog food on impulse. De La Hoya Aff. ¶ 6. Thus, consumers of dog food are ordinary and factor nine is not relevant to this case.

J. Weighing all nine factors, summary judgment should be denied because a reasonable jury could find PerforMax created a likelihood of confusion.

Based on the facts discussed above, a reasonable jury could find PerforMax created a likelihood of confusion between Nature's Best and Nature's Choice. Sutton's mark is strong (factor one) because the USPTO did not require proof of secondary meaning, and because Sutton has continually used the Nature's Choice mark since 1995 with substantial sales and advertising

expenditures. The marks are similar (factor two) because they use the same dominant term, incorporate a similar design, and the words are synonymous. Additionally, Nature's Best and Nature's Choice are indisputably similar goods (factor three) because both products are dry adult dog food. Likewise, Sutton and PerforMax use similar facilities (factor four) because the target markets overlap. Further, Sutton and PerforMax both use similar advertising (factor five) because the marks are advertised online and in print to a national audience. Intent (factor six) could favor Sutton because PerforMax had knowledge of Sutton's mark, the potential for consumer confusion, and ignored Sutton's cease-and-desist letter. Actual confusion (factor seven) favors Sutton because a consumer was confused within a week of PerforMax's product being brought to market, and a reasonable inference regarding decreased sales suggests further confusion took place. Quality of PerforMax's product (factor eight) may favor Sutton because the price and ingredients of Nature's Best gives it more prominent placement in Petco. Finally, consumer sophistication (factor nine) is irrelevant to this case because ordinary consumers purchase dog food on impulse.

A jury could find in favor of Sutton, particularly on the strength of Sutton's mark, PerforMax's intent to confuse consumers, and actual consumer confusion. Because the Fourth Circuit places the weight of trademark infringement on the foregoing three factors, a reasonable jury could conclude PerforMax has infringed on Sutton's trademark by producing a likelihood of confusion among consumers. For the above reasons, summary judgment should be denied.

Conclusion

Pursuant to Federal Rule of Civil Procedure 56(a), summary judgment should be denied because a reasonable jury could find in Sutton's favor on strength of mark, intent, and actual confusion. The USPTO's judgment provides Sutton with prima facie strength of mark, while

PerforMax's continued use of Nature's Best in the face of a cease-and-desist letter shows its intent to confuse consumers and profit from Sutton's reputation. Therefore, the defendant's motion for summary judgment should be denied.

Dated: April 24, 2022

Respectfully submitted,

/s/ Alexis Marvel
Alexis Marvel
George Mason, LLP
3301 Fairfax Drive
Arlington, VA 22201
(703) 993-8000
amarvel2@gmu.edu

Counsel for Plaintiff Sutton Family Mills, Inc.

CERTIFICATE OF SERVICE

I hereby certify that on this 24th day of April 2022, I served a true and correct copy of the foregoing Plaintiff's Memorandum of Law in Opposition to Defendant's Motion for Summary Judgment upon the following counsel for defendant, as follows:

Saul Goodman
Goodman & Associates
440 University Drive
Fairfax, VA 22030
saul.goodman@goodman.com

/s/ Alexis Marvel
Alexis Marvel
George Mason, LLP
3301 Fairfax Drive
Arlington, VA 22201
(703) 993-8000
amarvel2@gmu.edu

Counsel for Plaintiff Sutton Family Mills, Inc.

Applicant Details

First Name	**Meenu**
Last Name	**Mathews**
Citizenship Status	**U. S. Citizen**
Email Address	**mm5732@columbia.edu**
Address	**Address** Street **292 W 92nd Street** City **New York** State/Territory **New York** Zip **10025** Country **United States**
Contact Phone Number	**7326752761**

Applicant Education

BA/BS From	**George Washington University**
Date of BA/BS	**May 2018**
JD/LLB From	**Columbia University School of Law** **http://www.law.columbia.edu**
Date of JD/LLB	**May 15, 2023**
Class Rank	**School does not rank**
Law Review/Journal	**Yes**
Journal(s)	**Columbia Human Rights Law Review**
Moot Court Experience	**Yes**
Moot Court Name(s)	**Foundation Moot Court (Participant; Student Editor)**

Bar Admission

Prior Judicial Experience

Judicial Internships/ Externships	**No**

Post-graduate Judicial Law Clerk	**No**

Specialized Work Experience

Recommenders

Effron, Robin
robin.effron@brooklaw.edu
(718) 780-7933
Liebman, Benjamin
bl2075@columbia.edu
212-854-0678
Metzger, Gillian
gmetzg1@law.columbia.edu

This applicant has certified that all data entered in this profile and any application documents are true and correct.

Meenu Mathews
292 West 92nd Street
New York, NY 10025
(732)-675-2761
mm5732@columbia.edu

June 8, 2023

The Honorable Jamar Walker
Eastern District of Virginia
600 Granby Street
Norfolk, VA 23510

Judge Walker:

I am a recent graduate of Columbia Law School, and I write to apply for a clerkship in your chambers beginning August 2024 or any later term thereafter.

During my time at Columbia Law School, I have developed my research and writing skills both inside and outside the classroom. Through an externship with the NAACP Legal Defense & Education Fund, I gained exposure to litigation at both the district and appellate level by researching complex legal issues and drafting documents used in litigation. I have continued to develop these skills as a research assistant, academic coach, and student editor for the Foundation Moot Court Legal Practice Workshop. As the Executive Articles Editor of the *Columbia Human Rights Law Review*, I led a team of editors to select articles for publication. The skills I have developed in these roles, including my ability to work efficiently under pressure, will serve as an asset to chambers.

I know that a clerkship is an opportunity to find mentorship while developing my legal skills. As a woman of color, and the first in my family to attend law school, I did not grow up around lawyers. In fact, I would not have seen myself in the profession if not for strong mentors encouraging me to pursue a career in law. As I have navigated law school, I have made every effort to push for inclusivity in the field, form helping lead non-profits dedicated to supporting students from underrepresented groups to serving as the Mentorship Chair for Empowering Women of Color (EWOC) at the law school. Given your background and experiences, it would be an honor to serve as your clerk.

Enclosed please find a resume, transcript, and a writing sample. Following separately are letters of recommendation from Professors Gillian Metzger (646-530-0640, gmetzg1@law.columbia.edu), Benjamin Liebman (212-854-0678, bl2075@columbia.edu), and Robin Effron (718-780-7933, rje2104@columbia.edu). Thank you for your consideration. Should you need any additional information, please do not hesitate to contact me.

Respectfully,
Meenu Mathews

MEENU MATHEWS

292 West 92nd Street, New York, NY 10025 • (732) 675-2761 • mm5732@columbia.edu

EDUCATION

Columbia Law School, New York, NY
J.D., expected May 2023
Honors: James Kent Scholar; Harlan Fiske Stone Scholar
Activities: *Columbia Human Rights Law Review*, Executive Articles Editor
Teaching Fellow (Prof. Benjamin Liebman, Torts, Fall 2021)
Student Editor (Legal Practice Workshop, Spring 2023)
Academic Coach (Civil Procedure, Constitutional Law, Torts)
Columbia Clerkships Diversity Initiative
Empowering Women of Color, Membership Chair
Co-Director, Law School Mastery Pipeline Program

The George Washington University, Washington, DC
B.A., *summa cum laude*, International Affairs, received May 2018
Honors: Student Commencement Speaker
Presidential & Honors Scholar
Internships: The White House, Office of Public Engagement, Summer 2016
CNN, The Lead With Jake Tapper; Programming & Content Strategy, Summer & Fall 2017
Administrative Office of the U.S. Courts; Hiring & Special Programs, Summer 2015
New Jersey Courts, Middlesex County Court Presiding Judge Jamie Happas, Summer 2018
Activities: Student Association, Vice President of Public Affairs
Mock Trial
Study Abroad: London School of Economics, London, UK, Fall 2016–Spring 2017

EXPERIENCE

Davis, Polk, & Wardwell, New York, NY — New York, NY
Summer Associate (offer extended) — May 2022-August 2022
Drafted court documents and correspondence with opposing counsel in three complex litigation and restructuring matters. Drafted witness memos and researched legal issues related to ongoing government investigations.

NAACP Legal Defense & Educational Fund — New York, NY
Extern — September 2021-May 2022
Drafted portion Ninth Circuit brief on client's 1983 claims. Assessed merits of bringing Fourteenth Amendment and *Monell* claims to support ongoing investigations into bias-related incidents by law enforcement agencies. Researched and evaluated potential expert witnesses for ongoing appellate litigation.

Department of Justice, Washington, DC
Legal Intern, Civil Rights Division — July 2021–August 2021
Drafted four memoranda related to ongoing policy projects related to civil rights, including anti-protest legislation and recent hate crimes legislation. Researched federal government's actions related to artificial intelligence in housing. Prepared a presentation for the Criminal Section regarding gender-based hate crimes.

White & Case LLP, Washington, DC
1L Summer Associate (touchback completed in August 2022; offer extended) — May 2021–July 2021

Sard Verbinnen & Co., New York, NY
Associate, Junior Associate — September 2018–August 2020
Advised 35 public and private companies on corporate crises, reputational risk, and public relations.

LANGUAGES: Malayalam (fluent), French (intermediate)
INTERESTS: *New York Times* crossword, yoga, cooking global cuisine, listening to NPR podcasts

Columbia Law School

Registration Services

law.columbia.edu/registration
435 West 116th Street, Box A-25
New York, NY 10027
T 212 854 2668
registrar@law.columbia.edu

CLS TRANSCRIPT (Unofficial)

05/19/2023 15:39:52

Program: Juris Doctor

Meenu Mathews

Spring 2023

Course ID	Course Name	Instructor(s)	Points	Final Grade
L6293-2	Antitrust and Trade Regulation	Wu, Timothy	3.0	A-
L6655-1	Human Rights Law Review		0.0	CR
L6269-1	International Law	Cleveland, Sarah; Clooney, Amal	4.0	A
L6781-1	Moot Court Student Editor II	Bernhardt, Sophia	2.0	CR
L6423-1	Securities Regulation	Fox, Merritt B.	4.0	B+
L6822-1	Teaching Fellows	Bernhardt, Sophia	1.0	CR

Total Registered Points: 14.0

Total Earned Points: 14.0

Fall 2022

Course ID	Course Name	Instructor(s)	Points	Final Grade
L6422-1	Conflict of Laws	Monaghan, Henry Paul	3.0	B+
L6425-1	Federal Courts	Metzger, Gillian	4.0	A
L6655-1	Human Rights Law Review		0.0	CR
L6680-1	Moot Court Stone Honor Competition [Minor Writing Credit - Earned]	Bernhardt, Sophia	0.0	CR
L6274-3	Professional Responsibility	Rose, Kathy	2.0	B+
L9181-1	S. Asian Americans and the Law	Chin, Denny; Lee, Thomas	2.0	A-

Total Registered Points: 11.0

Total Earned Points: 11.0

Spring 2022

Course ID	Course Name	Instructor(s)	Points	Final Grade
L6231-2	Corporations	Talley, Eric	4.0	A
L6429-1	Federal Criminal Law	Richman, Daniel	3.0	B+
L6655-1	Human Rights Law Review		0.0	CR
L6169-1	Legislation and Regulation	Metzger, Gillian	4.0	A
L6685-1	Serv-Unpaid Faculty Research Assistant	Ponsa-Kraus, Christina D.	2.0	CR
L6683-2	Supervised Research Paper	Johnson, Olatunde C.A.	1.0	CR

Total Registered Points: 14.0

Total Earned Points: 14.0

Fall 2021

Course ID	Course Name	Instructor(s)	Points	Final Grade
L6241-1	Evidence	Shechtman, Paul	3.0	A-
L6611-1	Ex. Racial Justice	Kleinman, Rachel; Merle, Natasha	2.0	A
L6611-2	Ex. Racial Justice - Fieldwork	Kleinman, Rachel; Merle, Natasha	3.0	CR
L6655-1	Human Rights Law Review		0.0	CR
L6675-1	Major Writing Credit	Johnson, Olatunde C.A.	0.0	CR
L6683-1	Supervised Research Paper	Johnson, Olatunde C.A.	2.0	CR
L6822-1	Teaching Fellows	Liebman, Benjamin L.	4.0	CR

Total Registered Points: 14.0

Total Earned Points: 14.0

Spring 2021

Course ID	Course Name	Instructor(s)	Points	Final Grade
L6133-2	Constitutional Law	Hamburger, Philip	4.0	A-
L6108-2	Criminal Law	Harcourt, Bernard E.	3.0	B+
L6679-1	Foundation Year Moot Court	Strauss, Ilene	0.0	CR
L6130-7	Legal Methods II: Building Legal Change: Moving Advocacy Outside of Court	Hechinger, Scott; Rodriguez, Alejo; Shanahan, Colleen F.	1.0	CR
L6121-1	Legal Practice Workshop II	Harwood, Christopher B	1.0	HP
L6116-1	Property	Scott, Elizabeth	4.0	B+
L6912-1	Transnational Litigation	Bermann, George A.	3.0	A

Total Registered Points: 16.0

Total Earned Points: 16.0

Fall 2020

Course ID	Course Name	Instructor(s)	Points	Final Grade
L6101-2	Civil Procedure	Effron, Robin	4.0	A
L6105-1	Contracts	Kraus, Jody	4.0	B+
L6113-2	Legal Methods	Strauss, Peter L.	1.0	CR
L6115-1	Legal Practice Workshop I	Harwood, Christopher B; Neacsu, Dana	2.0	P
L6118-2	Torts	Liebman, Benjamin L.	4.0	A-

Total Registered Points: 15.0

Total Earned Points: 15.0

Total Registered JD Program Points: 84.0

Total Earned JD Program Points: 84.0

Honors and Prizes

Academic Year	Honor / Prize	Award Class
2022-23	Harlan Fiske Stone	3L
2021-22	James Kent Scholar	2L
2020-21	Harlan Fiske Stone	1L

Pro Bono Work

Type	Hours
Mandatory	40.0
Voluntary	1.3

ROBIN J. EFFRON
PROFESSOR OF LAW

June 6, 2023

To Whom It May Concern:

I am writing to recommend Meenu Mathews for a clerkship in your chambers.

Ms. Mathews was a truly outstanding student in my Fall 2020 civil procedure class at Columbia Law School where I taught as a visiting professor. She earned one of the highest A grades in the class on the final exam. Her exam reflected excellent writing ability as well as a solid mastery of the subject matter as tested in both essay and multiple choice. Ms. Mathews was a frequent and energetic contributor to class discussion. She often volunteered answers and thoughts in the general discussion and was well-prepared for her days "on call." Our remote learning experience utilized Zoom breakout rooms and I know that Ms. Mathews was an enthusiastic participant and leader in these group exercises and discussions, both from my observations when I "dropped in" and from the glowing comments of my teaching assistants who helped to facilitate those discussions.

Ms. Mathews was also very active in posting on the class discussion boards. These asynchronous forums were an important part of keeping the students connected to each other and to the material during our semester of remote learning. I appreciated the time and care she put into her comments, and the thoughtfulness with which she engaged with others.

In a semester in which it was particularly difficult to get to know students on a personal basis, it was my pleasure to engage with Ms. Mathews in a manner that was so enjoyable that I almost forget that we did not meet in person until nearly a year later in the fall of 2021. Ms. Mathews was a regular visitor to my Zoom office hours, during which she used the reading and lecture materials to cultivate broader discussions about litigation and its role in regulation and enforcement. Like many first-year law students, Ms. Mathews had a general sense that she was interested in litigation but was unsure of what a career as a litigator might mean. She also used our discussion of cases as a springboard to interrogate many of the underlying substantive law principles behind those disputes. In the years since she was my student, it has been my pleasure to see Ms. Mathews sharpen her interests and begin to craft a path toward a position as a government litigator in several possible capacities.

I also know that Ms. Mathews has been interested in a judicial clerkship for quite some time. During her 1L year, she helped organize a panel for the Law Women organization that featured Columbia Law School professors talking about their experiences as federal judicial clerks. I was very impressed with the event. Among other things, Ms. Mathews made sure that

250 JORALEMON STREET • BROOKLYN, NEW YORK 11201 • 718-780-7933 • FAX: 718-780-0375
ROBIN.EFFRON@BROOKLAW.EDU

Brooklyn Law School
ESTABLISHED 1901

ROBIN J. EFFRON
PROFESSOR OF LAW

there were professors who had clerked for district and appellate judges as well as Supreme Court justices. It impressed me that she recognized that these are different experiences and that students would benefit from hearing about different types of clerkship experiences. She moderated the panel along with a classmate, asking questions about our experiences that helped elucidate our day-to-day experiences as clerks, as well as the long-term benefits of a clerkship. It is notable that she exercised such able stewardship over this type of event in her first semester of law school.

In my observation, Ms. Mathews would be a superb asset to any chambers. Her warmth was evident even in our remote learning environment. She is collegial and inquisitive. She is firm in her core beliefs, but treats other points of view with respect and genuine interest. I have no doubt that she will be a successful lawyer and make many contributions to the public, whether it is through a position with the federal government, or by continuing to engage earnestly with colleagues in both formal and informal settings.

Ms. Mathews has my highest recommendation. Please do not hesitate to contact me with any further questions or concerns.

Sincerely.

/s/ Robin Effron

Robin Effron

250 JORALEMON STREET • BROOKLYN, NEW YORK 11201 • 718-780-7933 • FAX: 718-780-0375
ROBIN.EFFRON@BROOKLAW.EDU

June 12, 2023

The Honorable Jamar Walker
Walter E. Hoffman United States Courthouse
600 Granby Street
Norfolk, VA 23510-1915

Dear Judge Walker:

I am delighted to write in very strong support of Meenu Mathews' application for a clerkship in your chambers. Meenu will be an outstanding clerk.

Meenu was a student in my torts class during the fall of 2020. Meenu asked the best questions of any student in the class. Many students struggle to separate legal issues in torts from policy questions. Meenu saw these policy implications immediately and excelled at thinking beyond the doctrine to analyze societal issues that lie behind the cases we examine in the first-year torts curriculum. Meenu was unusually perceptive in seeing the link between torts litigation and broader questions of how civil litigation can both advance and impede social justice. Meenu did well in torts and in law school generally, earning academic honors every year.

Based on her performance in torts I asked Meenu to be a teaching assistant for a large section of torts during the fall of her 2L year. Again she excelled, helping students with doctrine and with adjusting to life in law school. I meet with my TAs weekly, and Meenu was very good in these meetings at making sure we went over the doctrinal points we had covered in class that week and also the policy implications. She has done well throughout law school, excelling in notoriously difficult courses such as Federal Courts. She also served as a Student Editor for our One L Legal Practice Workshop, where she helped train One Ls in writing briefs.

Outside of class, Meenu has shown her dedication to using the law to address inequities in our legal system and society. She has externed for the NAACP Legal Defense & Education Fund, has interned in the Civil Rights Division at DOJ, and has served as executive articles editor on the Columbia Human Rights Law Review. As the child of immigrants, she is deeply committed to diversifying the legal system. She served as a leader of Columbia Law School's Empowering Women of Color and has also directed PracticePro, an organization that seeks to expand the pipeline of students attending law school (and to support them while at law school). Prior to law school, she worked at a crisis management firm where, despite being just out of college, she helped in efforts to convince top management to address issues of diversity and inclusion within the firm (as well as with the firm's clients).

Meenu aims to pursue a career as a litigator. She will be beginning her career this fall at Davis Polk but sees herself shifting to the public sector in a few years. Meenu is a wonderful person and a great team player. She will be a great lawyer, and would be a fantastic clerk.

Please do not hesitate to let me know if you require any additional information.

Sincerely,

signature

Benjamin L. Liebman

Benjamin Liebman - bl2075@columbia.edu - 212-854-0678

June 08, 2023

The Honorable Jamar Walker
Walter E. Hoffman United States Courthouse
600 Granby Street
Norfolk, VA 23510-1915

Dear Judge Walker:

I am writing to recommend Meenu Mathews, a 2023 Columbia Law School graduate, for a clerkship in your chambers. Meenu is an extremely intelligent, thoughtful, and mature young lawyer with impressive analytic abilities. I am confident that she will be an outstanding law clerk and recommend her with the greatest enthusiasm.

I taught Meenu in two classes during her time at Columbia: Legislation and Regulation in her 2L spring, and Federal Courts in her 3L fall. She excelled in both, earning straight As. Meenu's performance in LegReg was particularly impressive. From early on, her class comments showed a sophisticated and nuanced understanding of the material. Her analytic abilities were exceptional; she stood out for her ability to see complications and tensions among different lines of doctrine as well as to identify and assess their underlying assumptions. I was also struck by how effectively she articulated her points. And her exam was off-the-charts good, one of the two best I received in the class. It was not just analytically sharp, but extremely well written — demonstrating the same clarity, concision, and effective presentation of her oral comments. I was so impressed by Meenu's class performances that I asked her to TA for me in the spring, but unfortunately, my going on government leave meant that I didn't get a chance to work with her in that role.

Meenu displayed the same strengths in Federal Courts. It was a larger class with fewer opportunities for in-class participation, but even so, Meenu's comments stood out for their analytic insights and eloquence. Again she wrote an extremely strong, well-written exam, excelled at both the issue spotters and the policy questions, and demonstrated a very sophisticated grasp of complicated doctrines.

Over the course of the two semesters I taught Meenu, I had a chance to meet with her a couple of times in office hours. I enjoyed all of our interactions. She displayed the same poise and eloquence in our conversations as I saw in class, and has a quiet self-confidence, warmth, and overall good humor that makes spending time with her a real treat. I am confident you would find her a wonderful addition to your chambers.

Please do not hesitate to contact me if there is any further information on Meenu I can provide.

Very truly yours,

Gillian E. Metzger

Gillian Metzger - gmetzg1@law.columbia.edu

PROXIMITY AS A PROXY FOR CRIMINALITY: A COMPREHENSIVE APPROACH TO THE FOURTH AMENDMENT CONCERNS OF GEOFENCING WARRANTS AND GUNSHOT DETECTION SOFTWARE

INTRODUCTION

Law enforcement's use of emerging technologies in apprehending suspects sits in perpetual tension with Fourth Amendment protections to one's locational technology.[1] Increasingly, these technologies aid law enforcement officials identify an individual's location at the time of a crime. Some of these tools are used *ex post*, to compile a list of potential suspects. One such tool—geofencing warrants—enable law enforcement agencies to petition technology companies for the location data of all users within a geographic radius.[2] In contrast, some tools—like gunshot detection software—alert law enforcement officials to crime in real-time.[3] These tools seem like effective aids to law enforcement officers. However, when used to apprehend criminal suspects, law enforcement officers often use proximity as a proxy for criminality.

This Note will focus how law enforcement's practices involving these technologies violates the Fourth Amendment protection against general warrants and searches without particularity.[4] However, while courts have recognized the Fourth Amendment concerns geofencing warrants

[1] *See, e.g.* Rachel Levinson-Waldman, *Hiding in Plain Sight: A Fourth Amendment Framework for Analyzing Government Surveillance in Public*, 66 EMORY L.J. 527, 530 (2017) [hereinafter *Hiding in Plain Sight*] (exploring the Fourth Amendment implications of emerging technologies used by law enforcement agencies).
[2] *See, e.g.*, *Geofence Warrants and the Fourth Amendment*, 134 HARV. L. REV. 2508, 2511-12 (2021); Jennifer Valentino-DeVries, *Google's Sensorvault Is a Boon for Law Enforcement. This is How It Works.*, N.Y. Times, (Apr. 13, 2019).
[3] *See About ShotSpotter*, https://www.shotspotter.com/company/ (last visited Jan. 18, 2022).
[4] U.S. CONST. amend. IV.; *infra* Section I.B (discussing requirements for a warrant to be constitutional under the Fourth Amendment).

raise,[5] litigants challenging the use of ShotSpotter have been largely unsuccessful in challenging the use of an alert alone to apprehend a criminal suspect.[6]

This Note argues for a comprehensive approach to technologies—specifically geofencing warrants and gunshot detection software— that use proximity as a proxy for criminality, through litigation, policy change, and industry buy-in.[7] Part I provides background on the mechanics of geofencing warrants and ShotSpotter. This section will also examine existing Fourth Amendment jurisprudence and how it relates to protecting locational privacy.[8] Part II will examine the Fourth Amendment concerns raised by geofencing warrants and gunshot detection software, analyzing how they fit into existing Fourth Amendment jurisprudence. Specifically, this section will explore how courts have treated geofencing warrants and gunshot detection software differently in existing precedent. Part III will propose a solution starting in the courts—litigating against the use of gunshot detection software as the sole verification of one's criminality on Fourth Amendment grounds.[9] However, a solution based on litigation alone is unlikely to prevail, given narrow Supreme Court jurisprudence regarding Fourth Amendment protections for criminal defendants—leaving much discretion to individual jurisdictions.[10] While a great deal of literature

[5] *See In re* Search of Information Stored at Premises Controlled by Google, No. 20 M 297 (D.E. 4) (N.D. Ill. July 8, 2020) (unsealed on July 16, 2020); *In re* Search of Info. Stored at Premises Controlled by Google, No. 20 M 392, 2020 U.S. Dist. LEXIS 152712 (N.D. Ill. Aug. 24, 2020); In the matter of the Search of Information That Is Stored at the Premises Controlled By Google, LLC, No. 21-MJ-5064-ADM (D. Kan. Jun. 4, 2021); *infra* Section II.B (exploring recent litigation denying law enforcement's efforts to use geofencing warrants in apprehending criminal suspects).

[6] For examples of such litigation, *see* Rickmon v. United States 952 F.3d 876, 884 (7th Cir. 2020); Funderburk v. United States, 260 A.3d 652, 657 (D.C. Cir. 2021); *infra* Section II.B (discussing recent litigation upholding the use of ShotSpotter alerts to apprehend criminal suspects).

[7] Geofencing warrants have drawn scrutiny because they reveal the identities of numerous individuals who are in proximity to a crime, even if they were not involved and did not witness the crime. *Geofence Warrants and the Fourth Amendment*, 134 HARV. L. REV. 2508, 2511-12 (2021).

[8] *See infra* Part I.

[9] *See infra* Part II.

[10] *See infra* Part III.

has suggested a reframing of evaluating law enforcement's use of emerging technologies,[11] a shift in jurisprudence should be supported by policy change and industry buy-in. Thus, this Note uses opposition by geofencing warrants to provide a framework to critics of ShotSpotter.

I. THE LANDSCAPE OF GEOFENCING WARRANTS AND GUNSHOT DETECTION SOFTWARE

Increasingly, law enforcement agencies adopt technology that allows them to place suspects at the scene of the crime.[12] This practice can pose grave Fourth Amendment concerns when presence near a scene of a crime—without involvement—can effectively provide law enforcement officials unfettered access to search an individual or apprehend a suspect based on their location alone. This Part provides background on recent technologies in which law enforcement agencies have used proximity as a proxy for criminality. Section I.A discusses law enforcement's use of two specific technologies—geofencing warrants and gunshot detection software. Section I.B details Fourth Amendment protections that are relevant to analyzing whether law enforcement's use of these technologies poses constitutional concerns.

A. Law Enforcement's Use of Emerging Technologies: Geofencing Warrants and Gunshot Detection Software

Law enforcement agencies routinely embrace emerging technologies to identify or indict criminal suspects. This section outlines the mechanics and processes of geofencing warrants and gunshot detection software—two recent methods that law enforcement agencies have used to apprehend criminal suspects.

1. Law enforcement's use of geofencing warrants

[11] *See*, e.g. Margaret Hu*, Cybersurveillance Intrusions and an Evolving Katz Privacy Test*, 55 AM. CRIM. L. REV. 127, 129 (2018) (stating that emerging technologies often fall outside the scope of existing Fourth Amendment precedent); Rachel Levinson-Waldman, *Hiding in Plain Sight: A Fourth Amendment Framework for Analyzing Government Surveillance in Public*, 66 EMORY L.J. 527, 552 (2017) [hereinafter "*Hiding in Plain Sight*"] (arguing for a reframing of Fourth Amendment jurisprudence to better accommodate protections for criminal defendants in the face of rapidly emerging technology).

[12] *See Geofence Warrants and the Fourth Amendment*, *supra* note 2.

Geofencing warrants are one tool that aid law enforcement officials in apprehending suspects based on their location. While law enforcement agencies do not collect this data, technology companies are increasingly able to collect detailed real-time location information of consumers.[13] Law enforcement agencies issue warrants directly to a technology company in order to access this data.[14] To execute a geofencing warrant, a law enforcement agency draws a virtual "fence" around an area where a crime occurred, and requests a list of devices that were within that fence when a crime occurred.[15]

Geofencing warrants rely on the data collection mechanisms technology companies employ. As data collection becomes increasingly prevalent, this places troves of data at the hands of law enforcement officials. For example, Google relies on the location history service linked to Android and Apple devices to collect user data from a variety of products.[16] This process typically starts when users set up Google's applications, such as Google Photos or Google

[13] Technology companies are increasingly able to collect precise location data on individuals who use their products. *See generally* Nathan Newman, *Search, Antitrust, and the Economics of the Control of User Data*, 31 YALE J. ON REG. 401, 435-437 (2014) (stating that Google's collection of Wi-Fi hotspots precipitated the technology company's access to increasingly precise real-time information about user location); Jennifer Valentino-DeVries, *Google's Sensorvault Is a Boon for Law Enforcement. This is How It Works.*, N.Y. Times, (Apr. 13, 2019), https://www.nytimes.com/2019/04/13/technology/google-sensorvault-location-tracking.html [hereinafter Valentino-Devries, *Google's Sensorvault Is a Boon for Law Enforcement*].

[14] *See Geofence Warrants and the Fourth Amendment*, *supra* note 2; *see also* Valentino-DeVries, *Google's Sensorvault Is a Boon for Law* Enforcement, *supra note* 2.

[15] *Id*. Geofencing is not exclusive to the law enforcement space. For example, retail companies can operationalize geofencing to target potential consumers within a certain radius of their stores. *See* Sarah Perez, *Target Launches Beacon Test in 50 Stores, Will Expand Nationwide Later This Year*, TECHCRUNCH (Aug. 5, 2015), https://techcrunch.com/2015/08/05/target-launches-beacontest-in-50-stores-with-expanded-rollout-later-this-year/ (noting that customers receive push notifications about deals when they enter a geographic radius). These examples of geofencing are relatively benign since their reach is narrow. *Id*. Users must have the mobile application installed and opt in to receive messages; at any point, they can choose to turn off notifications. *Id*.

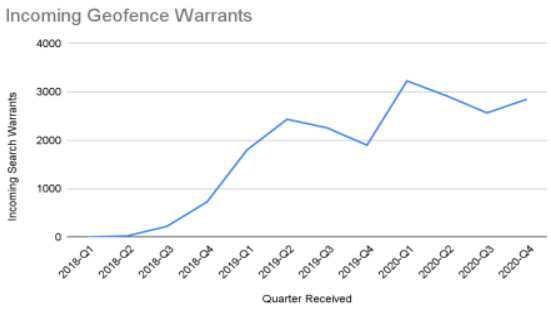
[16] *See generally Geofence Warrants and the Fourth Amendment*, *supra* note 2; Valentino-DeVries, *Google's Sensorvault Is a Boon for Law* Enforcement, *supra* note 2.

Maps.[17] The company compiles the location information into a database called Sensorvault.[18] Sensorvault was not created to serve law enforcement's interests—in fact, it was developed to collect information on Google users so that the company could deploy targeted advertisements.[19]

The first publicly documented geofencing warrant was a request for Sensorvault's data in 2018.[20] Since then, the use of geofencing warrants has increased exponentially.[21] Google's latest transparency report discloses that the company received almost three thousand geofencing warrant requests in the final quarter of 2020.[22] Overall, the data shows that the company has received over twenty thousand geofencing requests since 2018.[23]

[17] *Id*. Users can opt out of location services, but they will be prompted to share their location each time they install an application owned by Google. *See* Mohit Rathi, *Rethinking Reverse Location Search Warrants*, 111 J. CRIM. L. & CRIMINOLOGY 805, 810 (2021) (outlining Google's location data collection processes).
[18] Google's use of SensorVault is well-documented. *See, e.g. id* (detailing Google's process of capturing data in Sensorvault); Donna Lee Elm, *Geofence Warrants: Challenging Digital Dragnets*, 35 CRIM. JUST. 7 (2020) (stating that "Google tracked and stored in its behemoth SensorVault extremely precise location data on all devices that use Google's apps and operating systems.").
[19] *Id*.
[20] *See* Elm, *Geofence Warrants: Challenging Digital Dragnets supra* note 18 (stating that the first geofencing warrant asking for Google's SensorVault location data was issued in the wake of nine armed robberies).
[21] Aggregate data is not available from law enforcement agencies, but technology companies have made public statements about increasing requests via warrant. *See id* (detailing the amount of geofencing warrants received between 2018 and 2020). While other companies also receive such requests, Google appears to have the largest set of aggregated data. The remainder of this Note will focus on law enforcement's relationship with Google specifically.
[22] *See* Figure 1. *Id*. In a recent legal brief, Google noted that "Google has observed a 1,500% increase in the number of geofence requests it received in 2018 compared to 2017; and the rate increased from over 500% from 2018 to 2019." Brief of Amicus Curiae Google LLC in Support of Neither Party Concerning Defendant's Motion to Suppress Evidence From a "Geofence" General Warrant at 3, United States v. Chatrie, No. 3:19-cr-00130-MHL (2021).
[23] *See* Figure 1. *Id*.

Figure 1



Geofencing warrants that are publicly available provide scant details about the scope of search.[24] For example, a recent warrant request filed in Virginia stated that a geofencing warrant would help reveal the suspect in a robbery because the suspect had a phone in his hand at the time of the crime.[25]

For example, in a recent warrant request filed in Virginia, law enforcement officials cited that probable cause for the warrant included seeing that a suspect had a phone in his hand during a phone robbery.[26] The Eastern District of Virginia approved the warrant, and Google's data revealed location data on nineteen individuals during the requested time frame.[27] Geofencing warrants are characteristically broad—law enforcement provide little identifying detail about a

[24] Alike most warrants, many geofencing warrants are typically sealed and unavailable to the public. *See* Valentino-DeVries, *Google's Sensorvault Is a Boon for Law* Enforcement, *supra* note 2.
[25] Aff. For Search Warrant, Nat'l Assoc. of Crim. Def. Lawyers, https://www.nacdl.org/getattachment/fc0182fd-fe6c-452f-b31f-d7a63acc135a/edva-geofence-warrant.pdf (last visited Jan. 18, 2022) (citing that in a "September 2013 Pew Research Center study, it was determined that 91% of American adults own a cellular phone with 56% being smartphones….because of this, your Affiant believes that there is probable cause to believe that the offender(s) in the robbery would have had a mobile device on their person or within close proximity to them.").
[26] Aff. For Search Warrant, Nat'l Assoc. of Crim. Def. Lawyers, https://www.nacdl.org/getattachment/fc0182fd-fe6c-452f-b31f-d7a63acc135a/edva-geofence-warrant.pdf (last visited Jan. 18, 2022) (citing that in a "September 2013 Pew Research Center study, it was determined that 91% of American adults own a cellular phone with 56% being smartphones….because of this, your Affiant believes that there is probable cause to believe that the offender(s) in the robbery would have had a mobile device on their person or within close proximity to them.").
[27] Jon Schuppe, *Police used Google location data to find an accused bank robber. He says that's illegal,* NBC NEWS (Nov. 20, 2019), https://www.nbcnews.com/news/us-news/police-used-google-location-data-find-accused-bank-robber-he-n1086836).

potential suspect, often earning unfettered access to the data of any individual who happens to be at the scene of a crime.[28]

2. Law Enforcement's Increased Reliance on Gunshot Detection Software

Law enforcement agencies also employ gunshot detection software to assist with identifying crime and suspects. Gunshot detection software can help law enforcement agencies detect crime, because the software alerts an agency when it detects the sound of a gunshot. Similar to geofencing warrants, gunshot detection software enables law enforcement officials to identify individuals who are geographically close to—though perhaps not involved in—criminal activity.

ShotSpotter is the most prominent company bringing this technology to market.[29] The company was founded in 1996, and has contracts with over 120 cities, including San Francisco, Miami, and Chicago.[30] According to the company's website, ShotSpotter is a "leader in precision policing technology solutions that enable law enforcement to more effectively respond to, investigate and deter crime."[31] The company has contracts with over one hundred and twenty cities, and has reviewed over twenty-five million incidents.[32] While ShotSpotter has a host of products,[33] its flagship product is ShotSpotter Respond.[34]

---

[28] *See, e.g. Geofence Warrants and the Fourth Amendment*, *supra* note 2; *see also* Elm, *Geofence Warrants: Challenging Digital Dragnets supra* note 18 at 8 (stating that the first geofencing warrant was "in essence, a fishing expedition).

[29] *See About ShotSpotter*, https://www.shotspotter.com/company/ (last visited Jan. 18, 2022). Other companies include Acutate (*see* Mission, https://actuate.ai/company (last visited Jan. 18, 2022)); ZeroEyes (*About Us*, https://zeroeyes.com/, (last visited Jan.19, 2022)); and Scylla (*see About Us*, https://www.scylla.ai/gun-detection/ (last visited Jan. 19, 2021)). This Note will focus predominantly on ShotSpotter because it has produced the greatest amount of publicly available data about relationships with law enforcement agencies.

[30] According to the company's website, ShotSpotter has reviewed over twenty-five million incidents in over 120 cities. Since going public in 2017, its stock price has more than doubled. *See About ShotSpotter*, *supra* note 3.

[31] *About ShotSpotter*, https://www.shotspotter.com/company/ (last visited Jan. 18, 2021).

[32] *Id*.

[33] Other products include case management and forsenic services software. *See id*.

[34] ShotSpotter Respond was released in 1996, and its first trials took place in Redwood City and Washington, DC. *Id*.

The company publicly outlines a four-step process for gunshot detection on its website. The process starts when a gun is fired, and the sound waves radiate.[35] Second, acoustic sensors detect the sound, using a process called triangulation. Acoustic triangulation records sound waves to multiple sensors, and measures the speed and decibel level of a sound to determine the location of a gunshot.[36] The sounds form an "acoustic fingerprint" which filters out other noises that may be mistaken for gunfire.[37] Third, the "fingerprint" is sent to a ShotSpotter Incident Review Center where analysts audit data and direct confirmed gunshots to law enforcement officials.[38] Finally, alerts are sent to law enforcement dispatch centers so that officials can respond.[39] The company notes that "the entire process can take less than 60 seconds."[40] Importantly, ShotSpotter has only an audio—and not a video—component.[41] This means that once law enforcement agencies receive an alert, the technology provides no additional information about a suspect's appearance or whereabouts.

B. Fourth Amendment Protections Against Police Surveillance

The Fourth Amendment protects against unreasonable searches and seizures by requiring a warrant which (1) describes particularly the items to be searched, and (2) the probable cause necessitating the warrant.[42] This Section will outline the Fourth Amendment's historical and textual bases. Then, it will analyze current Fourth Amendment jurisprudence protecting criminal defendants when law enforcement agencies utilize emerging technologies. It will also outline the

[35] Platform, https://www.shotspotter.com/platform/, ShotSpotter (last visited Oct. 15, 2021).
[36] *Id*.
[37] *Id*.
[38] *Id*.
[39] *Id*.
[40] *Id*.
[41] *About ShotSpotter*, supra note 3.
[42] U.S. CONST. amend. IV.

appropriate context for a *Terry* stop,[43] which is an important exception to the warrant requirement.

1. Law Enforcement's Intrusion on Fourth Amendment Protections Against General Warrants

Both geofencing warrants and gunshot detection software raises Fourth Amendment concerns because they give law enforcement agencies great discretion to apprehend criminal suspects based on proximity to crime alone. The Fourth Amendment was crafted to combat the arbitrariness of the warrantless general searches that characterized British rule in the colonial era.[44] Prior to 1750, handbooks used by British justices of peace described only general searches.[45] General searches required no specificity about the items or records that could be seized during a search.[46] Provincial courts issued warrants for such searches, authorizing officials to search any house or individual.[47]

The Supreme Court has interpreted the particularity and probable cause required by the Fourth Amendment to be a protection against the permeating police surveillance that such general warrants posed.[48] Importantly, the specificity required by the Fourth Amendment

---

[43] *Terry* stops were developed in Terry v. Ohio. 392 U.S. 1 (1968); *infra* Section I.B (discussing *Terry* stops and the jurisprudence underlying this exception to the warrant rule).

[44] The Fourth Amendment dictates that "no Warrants shall issue but upon probable cause…and particularly describing the place searched, and the persons or things to be seized." *Id.* Ample scholarship has noted that the probable cause requirement was raised as a response to the general warrants rampant in the colonies. *See*, *e.g.*, Leonard W. Levy, *Origins of the Fourth Amendment*, 114 POL. SCI. Q. 79 (1999) (stating that the Fourth Amendment "repudiates general warrants by recognizing a 'right of the people to be secured in their persons, houses, papers, and effects, against unreasonable searches and seizures.'"); BRUCE A. NEWMAN, AGAINST THAT "POWERFUL ENGINE OF DESPOTISM" 2 (2007).

[45] Levy, *Origins of the Fourth Amendment*, *supra* note 44.

[46] *Id*.

[47] *Id.* at 90. Even more troubling than such general warrants were "writs of assistance"—documents that allowed the Crown's agents to enter any home within a given vicinity and seize any items deemed appropriate. *See* Newman, NEWMAN, AGAINST THAT "POWERFUL ENGINE OF DESPOTISM," *supra* note 44.

[48] *See, e.g.* Marron v. United States, 275 U.S. 192, 195 (1927) (stating that "the requirement of the Fourth Amendment that warrants shall particularly describe the things to be seized makes general searches under them impossible, and prevents the seizure of one thing under a warrant describing another."); Riley v. California, 134 S.

guarantees that "nothing is left to the discretion of the officer executing the warrant."[49] In *Ybarra v. Illinois*, the Court held that a warrant to search a bar and bartender did not give police the power to search every person who happened to be at the bar.[50] *Ybarra* seems to protect against the use of proximity as a proxy—just because an individual was at the bar where a crime occurred, did not enable the police to search every individual at the bar.

While traditional jurisprudence is somewhat helpful in the present context, the Supreme Court has acknowledged that "seismic shifts in digital technology" present novel issues to jurisprudence protecting against general warrants.[51] While new technologies provide meaningful assistance in identifying criminal suspects, they also raise privacy concerns unanticipated by the drafters of the Fourth Amendment.[52] As law enforcement agencies adopt new technologies, courts often struggle to categorize new tools using traditional Fourth Amendment standards.[53] For this reason, Fourth Amendment jurisprudence regarding emerging technology is somewhat

---

Ct. 2473, 1494 (2014) (noting that the Fourth Amendment was the "founding generation's response to the reviled 'general warrants' and 'writs of assistance' of the colonial era."); Groh v . Ramirez, 540 U.S. 551, 557 (2004) (requires both probable cause and "particularly describing the place to be searched, and the persons or things to be seized."); Camara v. Municipal Court of City and County of San Francisco, 387 U.S. 523, 528 (1967) (stating that the Fourth Amendment was intended to "safeguard the privacy and security of individuals against arbitrary invasions by governmental officials); Carpenter v. United States, 138 S. Ct. 2206, 2214. (2018) (noting that the Fourth Amendment is meant to "place obstacles in the way of a too permeating police surveillance.").

[49] Marron, 275 U.S. at 195.

[50] Ybarra v. Illinois, 444 U.S. 85 (1979). The Supreme Court has upheld the analysis in *Marron* and *Ybarra* in recent caselaw. *See* Thornton v. United States, 541 U.S. 615, 629 (2004) (iterating that a search can is justified only by the specific crime for the particular crime for which a suspect has been arrested).

[51] Carpenter, 138 S. Ct. at 2219 (2018). While this Note focuses most specifically on technologies tracking one's location, the Supreme Court has considered law enforcement's use of emerging technologies generally for over a century. For example, in *Olmstead v. United States*, the Supreme Court held that wiretapping did not qualify as a search or seizure under the Fourth Amendment, because law enforcement officials could not "seize" conversations in the same way they could seize physical materials. *See* 277 U.S. 438 (1928).

[52] Recent scholarship has documented that our understanding of what is protected under the Fourth Amendment is consistently expanding. The Fourth Amendment protects "persons, houses, papers, and effects." U.S. CONST. amend. IV. These protected categories "have expanded as the meanings of these terms has evolved over time." *See* Andrew Guthrie Ferguson, *The Internet of Things and the Fourth Amendment of Effects*, 104 CAL. L. REV. 805, 808 (2016). "Papers" has expanded to include "digital recordings, writings, business documents, and other communications." *Id*. "Effects" is not precisely defined by the Fourth Amendment, but in today's parlance, it certainly includes a smartphone. *Id*.

[53] *See*, e.g. Margaret Hu*, Cybersurveillance Intrusions and an Evolving Katz Privacy Test*, 55 AM. CRIM. L. REV. 127, 129 (2018) (stating that emerging technologies often fall outside the scope of existing Fourth Amendment precedent).

convoluted. However, in the past decade, the Supreme Court has demonstrated "a willingness to protect against surveillance, even if they unable to clearly articulate why."[54]

Justice Harlan's concurrence in *Katz v. United States* outlines the two-prong test used to assess whether law enforcement's use of technology violates the Fourth Amendment.[55] First, a court must determine whether an individual has "exhibited an actual (subjective) expectation of privacy."[56] Second, the court decides whether "society is prepared to recognize [the expectation] as reasonable."[57] *Katz*—decided in 1967—proved useful for technologies adopted by law enforcement agencies in the mid-twentieth century.[58] These technologies were far less invasive than present-day technologies, like geofencing warrants and gunshot detection software.[59]

Since *Katz*, the Supreme Court has made carveouts for certain types of technology, including when a technology precisely tracks an individual's location. For example, in *United States v. Jones*, the Court held that using a GPS tracker to monitor the location of a suspect's car raised

[54] *Id*.
[55] Katz v. United States, 389 U.S. 347 (1967). In *Katz*, federal agents attached an electronic device to the outside of a public phone booth to record the conversations of an individual suspected of violating federal law. *Id*. at 347. At trial, the government introduced audio recordings from the individual's side of the conversation. *Id*. On appeal, Katz argued that the recordings were impermissible evidence and the Supreme Court affirmed, holding that the devices were an intrusion of his expectation of private conversations, because "The Fourth Amendment protects people—and not simply 'areas.'" *Id*. at 352.
[56] *Id*.
[57] *Id*.
[58] *Katz* specifically dealt with electronic trackers, but other early cases citing *Katz* have involved beepers. *See*, e.g., United States v. Karo, 468 U.S. 705, 717 (1984) (holding that agents violated defendants' right to privacy by monitoring a beeper); United States v. Michael, 622 F.2d 744, 752 (5th Cir. 1980) (stating that neither exigent circumstances nor probable cause existed to justify attaching a beeper to a defendant's van).
[59] Not only are emerging technologies more invasive, but they are also more rapidly updated, creating a cycle by which courts cannot keep up with the Fourth Amendment risks they pose. This places *Katz* on especially uneven territory, because by the time a court sees a case, a technology may have already been updated to further threaten both the subjective and objective expectation of privacy. For a broader discussion of the implications of *Katz* in the face of modern-day technology, *see* Rachel Levinson-Waldman, *Hiding in Plain Sight: A Fourth Amendment Framework for Analyzing Government Surveillance in Public*, 66 EMORY L.J. 527, 552 (2017) [hereinafter "*Hiding in Plain Sight*"] (noting that *Katz*'s approach places "the government in an enviable position: when a technology is first introduced, it is new…it is clumsy. [But when society] has begun to grasp its true implications, it is too late; only an out-of-touch Luddite could be said not to understand.").

Fourth Amendment concerns.[60] During oral argument, Justice Sotomayor drew a parallel between GPS tracking and a general warrant, noting that "indiscriminate surveillance is the foundation of the Fourth Amendment."[61] More recently, in *Carpenter v. United States*, the Supreme Court evaluated the use of cell site location information (CSLI).[62] A search of such records—according to a majority of the Court—violated the Fourth Amendment, because an individual has a reasonable expectation of privacy in his physical movements.[63] In particular, data gleaned from CSLI was overwhelmingly intimate and fine-grained.

As the Court implied in *Jones*[64] and made explicit in *Carpenter*,[65] certain technologies are especially threatening to Fourth Amendment protections because they require law enforcement agencies to expend few resources. In these cases, the Supreme Court has departed from the *Katz* model, instead balancing the invasiveness of a technology against the relative ease with which a law enforcement agency can acquire such data.[66] *Jones* and *Carpenter* thus carve out an important exception to traditional Fourth Amendment jurisprudence, which lends little

[60] United States v. Jones, 565 U.S. 400 (2012). The Supreme Court was especially concerned that the GPS monitoring took place over the course of a full month and produced over 2,000 pages of data. *Id*.
[61] Transcript of Oral Argument at 29-30, United States v. Jones, 565 U.S. 400 (No. 10- 1259).
[62] Carpenter v. United States, 138 S. Ct. 2206 (2018). CSLI is typically collected by nearby cell towers and can pinpoint the physical location of a cellphone. The records enable law enforcement officials to access the date and time of calls and the approximate location of the individuals during the calls. Likewise, in Riley v. California, the Supreme Court held that data provides a trove of data a persons' private life, noting that a cell phone "contains in digital form many sensitive records previously found in the home; it also contains a broad array of private information never found in a home in any form—unless the phone is. 134 S. Ct. 2473 at 2478 (2014); *see also* United States v. Powell, 943 F. Supp. 2d 759, 780 (E.D. Mich. 2013) (stating that cell phones are "the easiest menas to gather the most comprehensive data about a person's public—and *private*—movements available."
[63] Carpenter, 585 U.S. 1 (2018). In *Carpenter*, law enforcement officials arrested four men for armed robbery. *Id*. One of the men confessed, and gave FBI officials his phone number, as well as the phone numbers of the other participants. *Id*. The FBI then applied for orders under the Stored Communications Act, as was customary for law enforcement officials seeking transactional records. *Id*.
[64] Transcript of Oral Argument at 36, United States v. Jones, 565 U.S. 400 (No. 10-1259) (expressing concern that GPS devices could attach to all vehicles and cheaply accessed by government or law enforcement agencies).
[65] Carpenter, 585 U.S. at 2223 (affirming that "the progress of science…does not erode" privacy protections and " a person does not surrender [such] rights by venturing into the public sphere.").
[66] *See* Transcript of Oral Argument at 57-58, United States v. Jones, 565 U.S. 400 (No. 10-1259); *see also* Margaret Hu, Orwell's 1984 and a Fourth Amendment Cybersurveillance Nonintrusion Test, 92 WASH. L. REV. 1819 (2018) (arguing that the Supreme Court's departure from *Katz* in recent Fourth Amendment jurisprudence is warranted).

expectation of privacy in public areas.[67] As emerging technologies become more ubiquitous and the costs to take advantage of these technologies fall, law enforcement agencies expend fewer and fewer resources to collect vast amounts of data.[68] These "costs" are not just the upfront costs to purchase the technology; instead, they also include the ease with which the technology can prevent law enforcement agencies from deploying law enforcement officers directly to a crime scene.[69]

The majority opinion in *Carpenter* also imposed limitations on the "third-party doctrine"—by which information supplied to a third party carried no reasonable expectation of privacy.[70] According to the Court, while the third-party doctrine was appropriate in situations in which an individual meant to provide such data to a third party, this information is not provided affirmatively in the case of cell phone records.[71] While the Supreme Court has not yet considered

[67] *See* United States v. Knotts, 460 U.S. 276, 281 (1983) (holding that law enforcement tracking an automobile via radio transmitter did not violate the Fourth Amendment, since the expectation of privacy on a public road is lower than one's expectation of privacy in one's home).
[68] *See* Justine Morris, *Surveillance by Amazon: The Warrant Requirement, Tech Exceptionalism, & Ring Security*, 27 B.U. J. SCI. & TECH. L. 237 (2021) (arguing that Amazon Ring police portal provides easy access to vast amounts of data, requiring minimal effort or money by law enforcement agencies); *see also Hiding in Plain Sight*, *supra* note 1 at 529 (2017) (noting that "the stock-in-trade of good policing often involves the real-time observation of people going about their daily business. This kind of visual observation, while potentially intrusive or discomfiting to the subject or passersby, does not raise constitutional issues. It is also, however, cost-and-resource intensive.").
[69] *See Hiding in Plain Sight*, *supra* note 1 (stating that the "cost of a device itself will be amortized over its life, which will vary depending on the type of device, the frequency of its use, and the regularity with which new technologies are developed and rolled out); *see also* Kevin S. Bankston & Ashkan Soltani, *Tiny Constables and the Cost of Surveillance: Making Cents Out of United States v. Jones*, 123 YALE L.J. ONLINE 335, 341 (2014) [hereinafter *Making Cents Out of United States v. Jones*].
[70] For a description of the third-party doctrine, *see generally* Michael Gentithes, *App Permissions and the Third-Party Doctrine*, 59 WASHBURN L.J. 35 (2020); Tricia A. Martino, *Fear of Change: Carpenter v. United States and Third-Party Doctrine*, 58 DUQ. L. REV. 353 (2020); Shawn Bass, *The Outdated Third-Party Doctrine and the Need for Modernization*, 65 N.Y. L. SCH. L. REV. 259 (2020); Neil Richards, *The Third Party Doctrine and the Future of the Cloud*, 94 WASH. U. L. REV. 1441 (2017).
[71] Carpenter v. United States, 138 S. Ct. 2206, 2219 (2018) (stating that "privacy protections do not fall out of the picture entirely" because individuals do not "voluntarily assume the risk of turning over a comprehensive dossier of his physical movements."); *see also* Kearston L. Wesner*, Is the Grass Greener on the Other Side of the Geofence: The First Amendment and Privacy Implications of Unauthorized Smartphone Messages*, 10 CASE W. RES. J.L. TECH. & INTERNET [iii] (2019) (iterating that individuals must divulge information about themselves to participate in the Internet of Things, which means that "data commoditization is relatively unrestrained and, predictably, consumers have reduced their privacy expectations"); *Hiding in Plain Sight*, *supra* note 1 at 550 (2017) (stating that "Technology itself—its ubiquity and its convenience—can dynamically change those expectations. As people

law enforcement's use of geofencing warrants or gun detection software, recent jurisprudence has provided a template for lower courts seeking to apply new methods of technology utilized by law enforcement.

2. Exceptions to the Warrant Rule: Terry Stops

In some cases, law enforcement agencies can usurp the Fourth Amendment warrant requirement. One such exception is a *Terry* stop, which allows police officers to stop and detain an individual if they have "reasonable suspicion" that the individual is armed or involved in criminal conduct.[72] Reasonable suspicion is a lower standard than probable cause, which is the standard required for a law enforcement officer to make an arrest.[73] Subsequent cases have provided context on the situations in which reasonable suspicion exists. One important line of cases examines whether an anonymous tip plays a role in forming the requisite reasonable suspicion for a *Terry* stop. In *Alabama v. White*, the Supreme Court noted that the information must corroborate an anonymous tip to provide an officer with reasonable suspicion.[74] Subsequently, in *Florida v. J.L.*, the Supreme Court held that a tip must have some degree of reliability beyond merely identify a potential crime.[75] An anonymous tip must specify why

become more reliant on their devices, the technology may seem less intrusive, making the apparent privacy risks recede as well.").

[72] *See* Terry v. Ohio, 392 U.S. 1 (1968). In *Terry*, the Supreme Court upheld a police officer's search of an individual when he was engaged in conduct that precipitated an armed robbery. *Id*. at 15.

[73] *See* Mallory v. United States, 354 U.S. 449, 454 (1957) (noting that "police may not arrest upon mere suspicion but only on 'probable cause.'"). The Supreme Court reasoned that the central inquiry in *Terry* stop cases is whether an officer's conduct is "reasonable." *Terry*, 392 U.S. 1 at 20. The reasonableness standard rests on whether a law enforcement officer can point to facts that would lead a neutral party to conclude that an individual was engaged in possible criminal conduct. *Id*.

[74] Alabama v. White, 496 U.S. 325, 327 (1990). In *White*, a caller indicated that someone would leave a specific address at a given time, in a given vehicle, with a briefcase of drugs. *Id*. at 325. The police observed the individual leaving the location and car matching the description. *Id*. In determining the standard for "reasonable suspicion", the Supreme Court opined that since reasonable suspicion was a lower bar than probable cause, a police officer could have less reliable information. *Id*. at 330; *see also Adams v. Williams* (holding that an unverified tip from an anonymous informant may not establish probable cause but can justify a *Terry* stop).

[75] Florida v. J.L., 529, U.S. 266 (2000). In *Florida v. J.L.*, law enforcement officials responded to an anonymous tip that a Black male had a handgun. *Id*. They arrived on the scene, saw a man fitting the description, reached into the man's pocket, and seized the gun. *Id*. The Supreme Court held that simply describing a suspect in a particular location does not satisfy the reasonable suspicion necessary to justify a *Terry* stop. *Id*.

behavior is illegal, and not just identify an individual.[76] Together, these cases establish an anonymous tip needs either independent corroboration or specific details about *future* illegal conduct to create the requisite reasonable suspicion for a *Terry* stop. *Terry* stops have played an important role in litigation involving gunshot detection software. Often, law enforcement agencies argue that technologies like ShotSpotter serve as anonymous tips with the requisite reasonable suspicion of an ongoing crime.[77]

II. FOURTH AMENDMENT CONCERNS RAISED BY GEOFENCING WARRANTS AND GUNSHOT LOCATION SOFTWARE

Because geofencing warrants and gunshot detection software provide reason to apprehend a criminal suspect based on location alone, it is important to evaluate the constitutional concerns posed by these technologies. This Part examines and compares the Fourth Amendment concerns posed by geofencing warrants and gunshot detection software. Part II.A analyzes the Fourth Amendment concerns raised when geofencing warrants lack particularity and probable cause. Part II.B examines the Fourth Amendment concerns raised by gunshot detection software, arguing that the software can serve as (1) justification to search as if with a general warrant, and (2) an anonymous tip lacking sufficient specificity or corroboration. Part II.B.2 will outline existing caselaw involving ShotSpotter, identifying why such litigation has been unsuccessful.

A. Geofencing Warrants Pose Grave Fourth Amendment Concerns

This Section analyzes geofencing warrants using existing Supreme Court Fourth Amendment caselaw. First, Section II.A.1 explains why geofencing warrants pose Fourth Amendment concerns using *Jones*[78] and *Carpenter*[79] as a guide. This Section will also argue that the third-

[76] *Id*.
[77] *See infra* Section I.B (discussing recent litigation in which prosecutors have successfully argued that ShotSpotter is an anonymous tip justifying a *Terry* stop).
[78] United States v. Jones, 565 U.S. 400 (2012).
[79] Carpenter v. United States, 138 S. Ct. 2206 (2018).

party doctrine is not a viable defense of geofencing warrants.[80] In Section II.A.B, I will outline existing caselaw protecting criminal defendants in the face of geofencing warrants.[81]

1. Analyzing Geofencing Warrants Based on Supreme Court Jurisprudence

Geofencing warrants rarely specify the particularity and probable cause required by the Fourth Amendment.[82] Regardless, these warrants often place precise locational data in the hands of law enforcement agencies. Applying the framework iterated by the Supreme Court in *Jones*[83] and *Carpenter*[84] to geofencing warrants highlights the Fourth Amendment concerns these warrants raise. Similar to GPS technology and CSLI data, geofencing warrants also pull locational data with great precision.[85] Geofencing warrants are thus analogous to the CSLI data in *Carpenter*, because they rely on location data pulled from an individual's cellphone. Cellphones hold "a broad array of private information"[86] and tracking location via cellphone usage poses the same threat of "indiscriminate surveillance" that the Supreme Court struck down in *Carpenter*.[87] In *Jones*, Justice Sotomayor expressed concern that a location tracking device could cheaply and efficiently attach to all vehicles, providing government agencies access to the location data of individuals.[88] Geofencing warrants bring this threat to life—law enforcement agencies do not need to expend many resources when issuing geofencing warrants. Because technology companies collect the locational data,[89] agencies need only request the data via

[80] I will expand on this *infra* Section II.A.1.
[81] This Section will focus specifically on how particularity and probable cause required by the Fourth Amendment are not present in many geofencing warrants.
[82] *See supra* Section I.B.1 (expressing the requirements set forth for constitutional warrants under the Fourth Amendment).
[83] United States v. Jones, 565 U.S. 400 (2012).
[84] Carpenter v. United States, 138 S. Ct. 2206 (2018).
[85] Geofencing warrants collect locational data with great precision. For greater detail on the mechanics that enable such precision, *see generally supra* Section I.A.1.
[86] Riley v. California, 134 S. Ct. 2473 (2014).
[87] *Carpenter*, 138 S. Ct. at 2214.
[88] United States v. Jones, 565 U.S. 400 (No. 10- 1259).
[89] *See supra* Section I.A.1 (discussing the mechanics of the data collection practices underlying geofencing warrants).

warrant. Thus, geofencing warrants pose fewer costs than those associated with planting a GPS tracker in *Jones*.[90] By balancing the low cost of obtaining geofencing warrant data with the high threat of intrusion, geofencing warrants pose many of the same constitutional concerns that the Supreme Court has identified in Fourth Amendment jurisprudence.

The third-party doctrine may appear a viable defense of geofencing warrants. After all, the Supreme Court's decision in *Carpenter* was narrow, rejecting the third-party doctrine in the context of CSLI data without eliminating the doctrine entirely.[91] However, the Court's reasoning seems to extend to the context of geofencing warrants. The Supreme Court first noted that its jurisprudence is especially protective against technology that provides detailed locational information.[92] But *Carpenter* also questioned "voluntary exposure"—central to the third-party doctrine—in the context of technology that can pull an individual's data.[93] First, smartphones are pervasive in modern-day society.[94] Second, individuals do not affirmatively agree to data-sharing each time they use their cellphone. Instead, most apps require initial consent of location data—this consent allows the app to track this data indefinitely, unless a consumer affirmatively turns off data sharing.[95]

---

[90] United States v. Jones, 565 U.S. 400 (2012).
[91] *See Carpenter,* 138 S. Ct. at 2210 (stating that "this decision is narrow."). In *Carpenter*, the Supreme Court "while the third-party doctrine applies to telephone numbers and bank records, it is not clear whether its logic extends to the qualitatively different category of cell-site records." It thus refused to extend the third-party doctrine to a "detailed and comprehensive record of person's movements." *Id*.
[92] *Id*. at 2219. (holding that "the Court has in fact already shown special solicitude for location information in the third-party context.").
[93] *Id.* at 2220 (holding that voluntary exposure does not apply in the context of CSLI). In *Carpenter*, the Supreme Court noted that the location of a cell phone is not "truly 'shared' as one normally understands the term….Virtually any activity on the phone generates CSLI, including incoming calls, texts, or e-mails and countless other data connections that a phone automatically makes when checking for news, weather, or social media updates." *Id*.
[94] Empirical data shows that a majority of Americans owns a smartphone. Mobile Fact Sheet, PEW RESEARCH CENTER (Apr. 7, 2021), https://www.pewresearch.org/internet/fact-sheet/mobile/ ("the vast majority of Americans—97%--now own a cellphone of some kind. The share of Americans that own a smartphone is now 85%, up from just 35% in Pew Research Center's first survey of smartphone ownership conducted in 2011).
[95] *See* Hu, *Cybersurveillance Intrusions and an Evolving Katz Privacy Test*, *supra note* 11 at 148 (stating that "modern big data technologies necessitate sharing private information with a wide range of third parties."). For

For these reasons, location data poses the concern raised by Justice Sotomayor in *Jones* that a location tracker could attach to all vehicles, providing access to government agencies.[96] Allowing law enforcement agencies unfettered access to this location data would enable an extension of the third-party doctrine that is in no way limited by the particularity and probable cause requirements of the Fourth Amendment. Geofencing warrants similarly collect locational data from cellphones, thus raising the same concerns as CSLI data. The Supreme Court has not yet granted *certiorari* in any cases involving geofencing warrants, but lower courts have started to identify the grave Fourth Amendment concerns the practice raises.

2. Litigation Striking Down Geofencing Warrants on Fourth Amendment Grounds

District courts in Illinois and Kansas have upheld motions to suppress data pulled from geofencing warrants. [97] These opinions held that the geofencing warrants at issue lacked both the particularity and probable cause required by the Fourth Amendment. These opinions tie together Fourth Amendment jurisprudence to find that geofencing warrants can serve as general warrants.[98] First, courts have struck down geofencing as general warrants because they lack probable cause. One of the opinions noted that "if the government can identify [a] wrongdoer only by sifting through the identities of unknown innocent persons without probable cause and in a manner that allows officials to "rummage where they please in order to see what turns up,"

empirical research exploring data sharing habits, *see* Jan Boyles, Aaron Smith, and Mary Madden, Privacy and Data Management on Mobile Devices, PEW RESEARCH CENTER (Sept. 5, 2012), http://www.pewinternet.org/2012/09/05/privacy-and-data-management-on-mobile-devices/ (finding that 19% of users disabled a phone's tracking abilities because of privacy concerns).

[96] United States v. Jones, 565 U.S. 400 (No. 10- 1259).

[97] *See In re* Search of Information Stored at Premises Controlled by Google, No. 20 M 297 (D.E. 4) (N.D. Ill. July 8, 2020) (unsealed on July 16, 2020); *In re* Search of Info. Stored at Premises Controlled by Google, No. 20 M 392, 2020 U.S. Dist. LEXIS 152712 (N.D. Ill. Aug. 24, 2020); In the matter of the Search of Information That Is Stored at the Premises Controlled By Google, LLC, No. 21-MJ-5064-ADM (D. Kan. Jun. 4, 2021). At the time of this writing, public defenders in San Francisco and Virginia have filed motions to suppress evidence based on geofencing warrants. *See* Motion to Quash and Suppress Evidence at 1, People v. Dawes, No. 19002022 (Cal. Sup. Ct. 2020); Motion to Suppress Evidence Obtained from a "Geofence" General Warrant, U.S. v. Chatrie, No. 3:19cr130 (E.D. Va. 2020).

[98] *Id*.

then courts should strike down the process.[99] The court noted that a law enforcement agency must provide "sufficient information on how and why cellphones may contain evidence of the crime" in order to meet the probable cause standard of the Fourth Amendment.[100] In this case, there was probable cause that a federal crime occurred at the identified location, but not that Google's location records would lead to a list of suspects.[101]

Second, district courts have noted that geofencing warrants lack the particularity required by the Fourth Amendment. It is important to note that this seems to be a characteristic of warrants to search data generally.[102] The Northern District of Illinois held that the geofencing warrant application was not sufficiently particularized because the geofencing boundaries could include data for cellphone users without connection to alleged criminal activity.[103]

Finally, district courts have been willing to extend the third-party doctrine to the context of geofencing warrants. One court noted that it is unlikely that consumers would "affirmatively realize, at the time they begin using the device, that they are providing their location to Google in a way that will result in the government's ability to obtain—easily, quickly, and cheaply—their precise geographical location at virtually any point in the history of their use of the device."[104]

---

[99] Matter of Search Warrant Application for Geofence Location Data Stored at Google Concerning an Arson Investigation, 497 F. Supp. 3d 345, 353 (N.D. Ill. 2020). The specific details of the criminal investigation were not released, but the court noted that the application sought geofencing data from a "sizeable business establishment" during an hourlong period on the date in question. *Id*.

[100] *Id*. at 41.

[101] *Id*. at 4—5. The Kansas District Court similarly noted that while it may be fair to assume that most individuals have cellphones, that does not indicate that the individual has been using a device feeding into Google's location services. In the matter of the Search of Information That Is Stored at the Premises Controlled By Google, LLC, No. 21-MJ-5064-ADM (D. Kan. Jun. 4, 2021).

[102] *See* James Czerniawski & Connor Boyack, *Reviewing the Privacy Implications of Law Enforcement Access to and Use of Digital Data*, 5 UTAH J. CRIM. L. 73, 78 (2021) (noting that "the digital nature of data complicates the ability to particularize and narrow a search if officers have access to all contents of a device.").

[103] *See In re* Search of Information Stored at Premises Controlled by Google, No. 20 M 297 (D.E. 4) (N.D. Ill. July 8, 2020) (unsealed on July 16, 2020).

[104] In re Search of Info. Stored at Premises Controlled by Google, 481 F. Supp. 3d 730, 737.

Geofencing warrants often lack particularity or probable cause, which can lead to inaccuracy in criminal apprehension. Because geofencing warrants turn up data on *every* individual whom a technology company has placed at the scene of a crime, they can perpetuate false arrests by using proximity as a proxy for criminality. For example, Jorge Molina was falsely arrested for murder in Avondale, Arizona, based on Google Maps records.[105] The geofencing warrant had placed Mr. Molina's Google account at the scene of the murder, which law enforcement officials took as a proxy for his physical presence.[106] After Molina had spent almost a week in jail, law enforcement officials identified Molina's mother's ex-boyfriend—Marcos Gaeta—as the likely suspect.[107] Similarly, Zachary McCoy was wrongfully arrested for a burglary based on a geofencing request in Gainesville, Florida.[108] McCoy used RunKeeper, a smartphone application that tracks how many miles an individual runs.[109] Location data provided to RunKeeper placed him at the scene of the burglary, despite the fact that McCoy had never entered the home.[110] Law enforcement officials eventually dropped the charges against McCoy because they had insufficient evidence to charge him with a crime.[111]

---

[105] Meg O'Connor, Avondale Man Sues After Google Data Leads to Wrongful Arrest for Murder, PHOENIX NEW TIMES (Jan. 16, 2020, 9:11 AM), https://www.phoenixnewtimes.com/news/google-geofence-location-data-avondale-wrongful-arrest-molina-gaeta-11426374.

[106] Law enforcement officials relied on just two pieces of evidence in arresting Molina— (1) Molina owned a white Honda and a white Honda was seen at the scene of the murder; and (2) location data pulled from Google Maps placed Molina at the scene of the crime. *Id*.

[107] *Id*. Because Molina was logged into his Google account from multiple devices, Google's location tracking services placed him in two places at once. *Id*. Despite the fact that a friend providing an alibi and texts to substantiate that Mr. Molina was not at the crime scene, he was not released from custody until his friend provided Uber receipts and law enforcement officials found a likelier suspect in Gaeta. *Id*.

[108] Kim Lyons, *Google location data turned a random biker into a burglary suspect*, THE VERGE (Mar. 7, 2020 5:23 PM), https://www.theverge.com/2020/3/7/21169533/florida-google-runkeeper-geofence-police-privacy.

[109] Jon Schuppe, *Google tracked his bike ride past a burglarized home. That made him a suspect*, NBC NEWS (Mar. 7, 2020), https://www.nbcnews.com/news/us-news/google-tracked-his-bike-ride-past-burglarized-home-made-him-n1151761.

[110] Kim Lyons, *Google location data turned a random biker into a burglary suspect*, THE VERGE (Mar. 7, 2020), https://www.theverge.com/2020/3/7/21169533/florida-google-runkeeper-geofence-police-privacy.

[111] *Id*. The impact of an arrest is long-lasting, even if an individual is released. Molina spent six days in jail; as a result of his arrest, he lost his job and suffered irreparable harm to his reputation. *See* id; *see also* James Czerniawski & Connor Boyack, *Reviewing the Privacy Implications of Law Enforcement Access to and Use of Digital Data*, 5 UTAH J. CRIM. L. 73, 89 (2021).

Even in cases where geofencing warrants are not struck down, their lack of particularity and clear probable cause create conditions in which law enforcement can chill other Constitutional protections. The effect of geofencing warrants has been particularly far-reaching in chilling the First Amendment right to protest. For example, law enforcement agencies used geofencing warrants to admonish protestors in the wake of the murder of George Floyd in 2020.[112] Because geofencing warrants can effectively serve as general warrants, law enforcement can track each protestor with a smartphone in "a mass-scale dragnet of location data and other personal identifiers."[113]

The presence of false arrests spurred by geofencing warrants demonstrate perpetuate the exact type of privacy violation that the Fourth Amendment seeks to avoid. Failure to meet the "particularity" and "probable cause" requirements of the Fourth Amendment reaffirm the grave threat that geofencing warrants pose to privacy rights. Specifically, these factors position geofencing warrants as a sort of "general warrant."

B. ShotSpotter Raises Fourth Amendment Concerns

This Section outlines the Fourth Amendent concerns posed by ShotSpotter, contrasting these concerns with how courts have treated law enforcement's use of the technology. First, Section II.B.1 will outline why gunshot detection software raises similar concerns that geofencing

[112] Katelyn Ringrose & Divya Ramjee, Watch Where You Walk: Law Enforcement Surveillance and Protester Privacy, 11 CALIF. L. REV. ONLINE 349, 355 (2020-2021) (stating that "law enforcement officers can use [data obtained from geofencing warrants] to determine which individuals have frequented a protest and follow that individual's exact movements."); California police issued a warrant to technology companies to identify personal information—including telephone numbers and names—of demonstrators at the 2017 protests at the University of California, Berkeley. UCSB Search Warrant, ELECTRONIC FRONTIER FOUNDATION (Aug. 2017). It is worth noting that this use of location tracking precedes geofencing warrants altogether. For example, in 2010, Michigan law enforcement officials were reported to have asked a cellphone provider for information about cellphones that were gathering in the area of an anticipated labor union protest. *See Hiding in Plain Sight*, *supra* note 1 at 531.

[113] *Watch Where You Walk*, *supra* note 112 at 356 (2020-2021). In many of these cases, "protestors might not even know that their data was collected through such a search.").

warrants raise under *Jones*[114] and *Carpenter*.[115] This Section then turns to the positive correlation between ShotSpotter alerts and *Terry* stops, exploring why ShotSpotter is an anonymous tip lacking specificity or corroboration.[116]

1. ShotSpotter Fourth Amendment Concerns Based on Supreme Court Precedent

While the Fourth Amendment concerns raised by geofencing warrants fall more neatly into a Fourth Amendment framework,[117] ShotSpotter similarly uses individual location as a proxy for criminality. Therefore, there is reason to consider how the technology fares under existing Supreme Court precedent. ShotSpotter's costs and indefinite duration balance against the technology's potential for invasiveness, posing analogous concerns to the technology struck down in *Jones*[118] and *Carpenter*.[119] In *Jones*, the Supreme Court raised concerns that the long duration of monitoring—2 months in that case—raised Fourth Amendment concerns.[120] Since ShotSpotter is stationary, the duration of monitoring can be indefinite. The Supreme Court also called out low costs balanced against intrusion in *Jones* and *Carpenter*.[121] While ShotSpotter has heftier upfront costs than geofencing warrants, the technology can save the costs of deploying officers to patrol the areas in which the technology is deployed.[122]

---

[114] United States v. Jones, 565 U.S. 400 (2012).
[115] Carpenter v. United States, 138 S. Ct. 2206 (2018).
[116] *See* CHI. POLICE DEP'T, THE CHICAGO POLICE DEPARTMENT'S USE OF SHOTSPOTTER TECHNOLOGY 19 (2021), https://igchicago.org/wp-content/uploads/2021/08/Chicago-Police-Departments-Use-of-ShotSpotter-Technology.pdf.
[117] *See supra* Part II.A.1 (discussing the Fourth Amendment concerns posed by geofencing warrants).
[118] United States v. Jones, 565 U.S. 400 (2012).
[119] Carpenter v. United States, 138 S. Ct. 2206 (2018).
[120] *Jones*, 565 U.S. at 402.
[121] *See Jones*, 565 U.S. at 419 (stating that while law enforcement may have briefly pursued a suspect before the advent of technology that made location tracking easier, doing so "for any extended period of time was difficult and costly and therefore rarely undertaken"); *Carpenter*, 138 S. Ct. at 2217 (noting that GPS monitoring and cell phone tracking is "remarkably easy, cheap, and efficient compared to traditional investigative tools.").
[122] *See Making Cents Out of United States v. Jones*, supra note 69.

Of course, these concerns must be balanced against the invasiveness of the technology itself.[123] ShotSpotter is distinguishable from the GPS technology in *Jones*,[124] since it is not technically a tracking device. Regardless, it often provides blanket "probable cause" to law enforcement officials to search any individual once an alert is sounded.[125] In considering ShotSpotter's intrusiveness, it is worth noting that the technology does not inculcate the third-party doctrine—which, even after *Carpenter*—provides a shield to certain types of technology used by law enforcement.[126] In the case of ShotSpotter, individuals are not affirmatively providing consent to a third-party. Instead, they can be apprehended simply for walking or driving when a law enforcement officer receives an alert.

Empirical research has revealed that there is a positive correlation between ShotSpotter alerts and *Terry* stops.[127] A report by the Chicago Office of the Inspector General (OIG) found that officers often note ShotSpotter alerts as the element providing reasonable suspicion for a stop leading to an arrest during a *Terry* stop.[128] Because the software alerts police to the sound of gunshots, the technology effectively serves as an anonymous tip. Therefore, it is important to consider whether ShotSpotter can provide the requisite "probable cause" for a *Terry* stop.[129]As established in *J.L.*[130] and *White*,[131] an anonymous tip must be independently corroborated or

[123] *See supra* Secton I.B.1 (outlining Fourth Amendment jurisprudence).
[124] For a discussion, *see supra* Part I.B.1.
[125] *See infra* (discussing how courts often allow a ShotSpotter alert to give law enforcement officials virtually unfettered grounds to search anyone in a given vicinity).
[126] *See supra* Part I.B.1 (discussing the third-party doctrine).
[127] A report conducted by the Chicago Office of the Inspector General (OIG) found a positive correlation between ShotSpotter deployment and *Terry* stops. *See* CHI. POLICE DEP'T, THE CHICAGO POLICE DEPARTMENT'S USE OF SHOTSPOTTER TECHNOLOGY 19 (2021), https://igchicago.org/wp-content/uploads/2021/08/Chicago-Police-Departments-Use-of-ShotSpotter-Technology.pdf. ShotSpotter deployment led to a total of 1,056 investigatory stop reports (ISRs). *Id*. This amounted to a *Terry* stop as a result of 2.1% of total ShotSpotter alerts.
[128] *Id*.
[129] *See id* (in which law enforcement officers used a ShotSpotter alert to justify a *Terry* stop).
[130] Florida v. J.L., 529, U.S. 266 (2000).
[131] Alabama v. White, 496 U.S. 325, 327 (1990).

provide specificity about the likelihood of future illegal conduct.[132] In terms of predicting future crime, ShotSpotter poses an anonymous tip closer to that in *J.L.* than *White*.[133] Relaying a past gunshot does not suggest with any specificity that further crime will occur. A stronger argument can be made when ShotSpotter is used to apprehend criminal suspects in cases where multiple alerts signaled an ongoing crime. However, law enforcement agencies often apprehend criminal suspects based on one stop alone.[134]

The alerts themselves also do not serve as independent corroboration. Concerns about reliability are exacerbated by the fact that legal and statistical research questions ShotSpotter's accuracy. An *Associated Press* investigation found that the technology often misses live gunfire, while simultaneously mischaracterizing everyday activities as gunfire.[135] These mischaracterizations can lead to false arrests, similar to those in cases involving geofencing warrants.[136] In one case, a man accused of murder based on audio from ShotSpotter, despite a lack of motive or eyewitnesses.[137] Law enforcement officials eventually released the man because of insufficient evidence.[138] This case demonstrates the risk of ShotSpotter data serving as a proxy for an anonymous tip.[139]

---

[132] For a broader discussion about the Supreme Court's jurisprudence regarding anonymous tips, *see supra* Part I.B.2.
[133] *Id*.
[134] *See, e.g.*, Transcript of Suppression Hearing at 67, U.S. v. Rickmon, 952 F.3d 876 (7th Cir. 2020) (No. 20-744).
[135] Garance Burke et al., How AI-powered tech landed man in jail with scant evidence, ASSOCIATED PRESS (Aug. 19, 2021). Notably, a number of cities—including Charlotte, San Antonio, and Fall River, Massachusetts—opted to stop using ShotSpotter after the technology sparked a number of such false reports. *See id*; *see also* Brian Fraga, *'False alarms' lead Fall River to ditch ShotSpotter system*, HERALD NEWS (Jul. 27, 2017); *see* also ShotSpotter is deployed overwhelmingly in Black and Latinx neighborhoods in Chicago, MACARTHUR JUSTICE CENTER (finding that the technology generated over 41,000 dead-end police deployments in Chicago, comprising 88.7% total ShotSpotter alerts).
[136] *See* Burke et al., How AI-powered tech landed man in jail with scant evidence, *supra* note 136.
[137] *Id*. Michael Williams was arrested based on ShotSpotter data alone. *Id*. In that case, Williams was driving a car and a passenger was shot in a drive-by shooting. *Id*. Police officers arrested Williams based on ShotSpotter audio that placed him at the scene of the crime. In naming Williams a suspect, prosecutors were unable to produce a motive or any additional eyewitnesses. *Id*.
[138] *Id*. Williams was eventually released due to insufficient evidence, but the arrest cost him his job and did permanent damage to his reputation. *Id*.
[139] Williams' case is not unique. ShotSpotter data has been admitted in at least 200 cases as of August 2021. *Id*.

To bolster the argument against using ShotSpotter as the sole basis for reasonable suspicion, two circuits found that the sound of gunshots alone do not provide sufficient grounds to stop every individual in a geographic radius.[140] In *United States v. Delaney*, the D.C. Circuit reversed the district court's denial of a motion to suppress evidence, holding that "the specificity [required by the Fourth Amendment] is precisely what is missing [in that case]."[141] In *United States v. Curry*, the Fourth Circuit held that the sound of gunshots alone did not warrant stopping an individual who did not act in a way that caused any suspicion.[142] Ultimately, the Fourth Circuit found that gunshots do not constitute an "exigent circumstance" that allows law enforcement officers to sidestep the reasonable suspicion required by *Terry*.[143]

At the heart of the Fourth Amendment concerns between ShotSpotter data and an individual suspect is the tenuous connection between the alert and the individual who committed a crime. In fact, law enforcement's practice of stopping any individual in the vicinity when they receive an alert essentially removes any requirement of particularity or probable cause required by the Fourth Amendment.[144]

2. The Gap Between Recent Decisions and Fourth Amendment Protections

[140] United States v. Delaney, 955 F.3d 1077 (D.C. Cir. 2020); United States v. Curry, 965 F.3d 313 (4th Cir. 2020)(en banc).
[141] *Delaney*, 955 F.3d at 1077. in *Delaney*, law enforcement officials heard gunfire in multiple directions. *Id*. They then saw that one of the cars in a nearby parking lot was occupied and instructed the passengers to open the door. *Id*. In reversing the district court's decision, the D.C. Circuit noted that nothing differentiated the detained individual from any other individual. *Id*.
[142] *Curry*, 965 F.3d at 313. In *Curry*, officers patrolled a housing community and heard gunshots. *Id*. They then found men walking in a nearby open field, where they believed shots were fired. *Id*. While the men did not act in a way that caused suspicion, the officers searched them and charged one individual as a felon in possession of a firearm. *Id*.
[143] *See id* (finding that the "exigent circumstances" exception to *Terry*'s reasonable suspicion requirement is narrow. Those exceptions include (1) pursuing a fleeing suspect, (2) protecting individuals at risk of imminent harm, or (3) preventing the imminent destruction of evidence).
[144] *See supra* Part I.B.1 (discussing the constitutional requirements of warrants).

Thus far, courts have refused to suppress evidence on Fourth Amendment grounds.[145] In *Rickmon v. United States*, the Seventh Circuit found in favor of the government, characterizing ShotSpotter as an anonymous tip.[146] The majority opinion lays out certain factors justifying the law enforcement officer's reliance on the ShotSpotter alert, including the fact that his car was the only car on the road, and the alert occurred early in the morning when not many cars were on the road.[147] The D.C. Circuit ruled similarly in *Funderburk v. United States*, finding that although the officers who apprehended a criminal suspect had no corroborating information about a potential suspect, but that "sometimes the universe of potential suspects will be small enough that no description at all will be required to justify a stopping for investigation."[148] Similar to *Rickmon*, the D.C. Circuit found that the "anonymous tip" did not provide "doubtful veracity."[149] Trial courts have followed the Seventh Circuit and D.C. Circuit, using ShotSpotter alerts as a license for reasonable suspicion.[150]

Here, it is important to identify the gap between Fourth Amendment jurisprudence and the litigation involving ShotSpotter. Courts that have denied Fourth Amendment claims have failed to consider what constitutes proper corroboration of an anonymous tip,[151] and the ease with

[145] Litigants have found limited success in bringing evidentiary challenges to the use of ShotSpotter's data in court. For example, in *People v. Hardy*, a California appellate court held that a ShotSpotter audio recording could not be admitted because the trial court did not conduct an evidentiary hearing to assess the evidence's scientific reliability. 65 Cal. App. 5th 312 (Cal. App. 2021) (noting that ShotSpotter data is scientific, and thus must meet the *Kelly* and *Frye* standard under California common law).
[146] *See* Rickmon v. United States 952 F.3d 876, 884 (7th Cir. 2020). In *Rickmon*, the court noted that ShotSpotter provided an anonymous tip that was then corroborated by 911 calls. *Id*.
[147] *Id*. at 884.
[148] 260 A.3d 652, 657 (D.C. Cir. 2021).
[149] *Id*. at 657. In *Funderbunk*, the court held that the officers heard "several gunshots" and a "commotion" which sounded like an argument. *Id*.
[150] *See, e.g.*, United States v. Garcia, 2021 U.S. Dist. LEXIS 92945 (N.D. Oh. 2021) (finding that while a ShotSpotter alert—similar to a neighbor's report—does not by itself provide reasonable suspicion, but can be corroborated because officers followed the alert and spoke with other individuals); *United States v. Dias*, 2020 U.S. Dist. LEXIS 191250 (S.D.N.Y. 2020) (finding that ShotSpotter was one piece in a larger puzzle of the "totality of circumstances," creating reasonable suspicion for a *Terry* stop).
[151] *See supra* Part I.B.2 (discussing what is needed to properly corroborate an anonymous tip).

which a ShotSpotter alert can superimpose the particularity and probable cause requirements of the Fourth Amendment.[152] Under *Delaney*[153] and *Curry*,[154] gunshots that law enforcement officers heard directly could not provide the reasonable suspicion needed for a *Terry* stop. There is no data suggesting that ShotSpotter data is any more reliable than the firsthand identification of gunshots.[155] In fact, a ShotSpotter engineer testified that ShotSpotter's data is "not perfect" and that the "dot on the map is simply a starting point."[156]

Adding to concerns about reliability are allegations that the company has complied with requests from law enforcement agencies to manipulate data when data is used in court. In a 2016 criminal trial in Rochester, New York, defense counsel identified that a ShotSpotter employee reclassified sounds from a helicopter to a gunshot.[157] The employee acknowledged that the company reclassified the data in response to a Rochester Police Department request, testifying that this was normal company policy.[158]

The strongest cases for corroboration of a ShotSpotter alert are those cases supported by a 911 call.[159] However, as Rickmon's defense counsel argued in a petition for *certiorari*, a 911 call does not necessarily provide the individualized suspicion that a ShotSpotter alert fails to provide.[160] ShotSpotter merely alerts law enforcement officials of a gunshot, without providing any

---

[152] *See supra* Part I.B (discussing the Fourth Amendment concerns that ShotSpotter poses).
[153] United States v. Delaney, 955 F.3d 1077 (D.C. Cir. 2020).
[154] United States v. Curry, 965 F.3d 313 (4th Cir. 2020) (en banc).
[155] In fact, evidence supports the contrary notion—that a ShotSpotter alert may not be accurate. In a petition for certiorari, attorneys for Rickmon cited both circuit court decisions in an effort to argue against the use of ShotSpotter. *See* Transcript of Suppression Hearing at 67, *U*.S. v. Rickmon, 952 F.3d 876 (7th Cir. 2020)(No. 20-744).
[156] Todd Feathers, *Police Are Telling ShotSpotter to Alter Evidence From Gunshot-Detecting AI*, VICE (Jul. 26, 2021).
[157] *Id*.
[158] *Id*. The employee—Paul Greene—testified that ShotSpotter "trusts its law enforcement customers to be really upfront and honest" with the company. *Id*. Greene gave similar testimony in a San Francisco murder trial in which ShotSpotter employee moved the location of a gunshot a block away to match the scene of the crime.
[159] Rickmon v. United States 952 F.3d 876, 884 (7th Cir. 2020).
[160] Petition for Writ of Certiorari, United States v. Rickmon, cert. denied (No. 20-733) (stating that "a bare-boned tip from a ShotSpotter report does not become any more reliable with an equally bare-boned 911 call.").

specificity of the circumstances of the shot fired, or the possibility of future crime. Thus, it is worthwhile to distinguish the information the 911 call provides. For example, a call that provides any additional specificity—such as details that help law enforcement officials identify a suspect or provide the direction in which a suspect is moving, may constitute proper corroboration. Under these circumstances, a ShotSpotter would be analogous to the anonymous tip in *White*[161]—providing an initial alert, but with corroboration that supplies the "reasonable suspicion" needed for a *Terry* stop.

Without this additional corroboration, ShotSpotter alerts lack any sort of particularity or probable cause, usurping Fourth Amendment protections. In his *Rickmon* dissent, Chief Judge Wood makes a compelling argument about the possibility that ShotSpotter will serve as a general warrant.[162] The dissent identifies the weak connection between the alert and a search of *any* individual within the vicinity of a ShotSpotter alert.[163]

When considering the shortcomings of existing caselaw to evaluate the Fourth Amendment concerns posed by gunshot detection software, it is important to take into account how the technology is deployed. In many cases, it appears that ShotSpotter is used to justify a heavy police presence instead of to prevent crime. For example, recent data suggests that ShotSpotter is deployed disproportionately in communities of color.[164] The data collected by the

[161] United States v. White, 401 U.S. 745, 793 (1971).
[162] 952 F.3d at 885 (J. Wood, dissenting).
[163] *Id*. Judge Wood writes that the Fourth Amendment prevents police from "simply [forcing] every person or every car to stop, in hopes that they might uncover evidence of crime." *Id*. He further notes that "the only thing that distinguished the car [the officer] chose to stop was that it existed, and it was the only car on the street at that early hour of the morning. *Id*. at 886. In fact, in *Rickmon*, the law enforcement officer agreed that he would have stopped any car he saw on the street based on the information he had. *See* Transcript of Suppression Hearing at 67, U.S. v. Rickmon, 952 F.3d 876 (7th Cir. 2020) (No. 20-744).
[164] Recent studies show that the Chicago Police Department chose to deploy ShotSpotter technology in twelve districts, which coincided directly with the districts that had the highest proportion of Black and Latinx residents. *See ShotSpotter is deployed overwhelmingly in Black and Latinx neighborhoods in Chicago*, MacArthur Justice Center (Aug. 15, 2021); *Houston city councilmember concerned ShotSpotter may disproportionately impact communities of color*, ABC NEWS (Jan. 22, 2022).

technology is then included in routine crime statistic reporting, exacerbating the cycle of overpolicing in these neighborhoods.[165] While both ShotSpotter alerts and citizen-made 911 calls reporting gunshots resulted in unfounded law enforcement responses, districts deploying ShotSpotter reported between one thousand and five thousand additional unfounded police deployments per district each year.[166] ShotSpotter's deployment in these areas contributes to an increased police presence, but also creates a cycle necessitating future police presence.[167]

III. PREVENTING PROXY: USING OPPOSITION TO GEOFENCING WARRANTS AS A FRAMEWORK TO OPPOSE OVERUSE OF GUNSHOT DETECTION SOFTWARE

Although both geofencing warrants and gunshot detection software utilize proximity as a proxy for criminality, criminal defendants challenging the use of geofencing warrants have been more successful than defendants challenging the use of gunshot detection software. A comprehensive approach to this problem requires action in and out of court. This Part begins by explaining how recent litigation strategy opposing geofencing warrants can be a helpful reference point for future litigation in which criminal defendants challenge the use of ShotSpotter. This necessitates an out-of-court approach to bolster Fourth Amendment protections. First, in order provide more comprehensive protection for privacy rights, critics of gunshot detection software can also look to steps taken by critics of geofencing warrants in the policy space. This policy change can in turn place pressure on technology companies to change course.

---

[165] *Id*.
[166] *See ShotSpotter is deployed overwhelmingly in Black and Latinx neighborhoods in Chicago*, *supra* note 135.
[167] *See id* (noting that data collected from ShotSpotter is included in CompStat reports, meaning that false reports of gunfire are included in crime statistic reporting).

A. The Litigation Gap: Litigating Fourth Amendment Claims and Why Current Jurisprudence Provides a Murky Path Forward

Fourth Amendment precedent is typically decided narrowly, based on theories focused on law enforcement's targeted actions, rather than overarching technology allowing blanket surveillance or tracking.[168] Defendants seeking to suppress a geofencing warrant follow this framework. In the context of geofencing warrants, criminal defendants focus on the actions taken by law enforcement agencies to apprehend criminal defendants, instead of solely on the broad capabilities technology companies have to surveil individuals.[169] Thus, they focus on individual harm rather than on the harm of the technology more broadly. In contrast, criminal defendants attempting to suppress the use of ShotSpotter tend to focus on the technology's role as an anonymous tip.[170] This can be effective in some cases, but this argument tends to focus more broadly on ShotSpotter's inability to serve as blanket surveillance.

Thus, changing course to focus more closely on the tendency of law enforcement officers to use a ShotSpotter alert to transform proximity into criminality can serve as a stronger Fourth Amendment argument. The dissent in *Rickmon* helps provide a framework to criminal defendants seeking to make this argument.[171] While that argument did not find favor with a majority of the court, *Rickmon* can be distinguished from cases in which ShotSpotter is deployed in more densely populated areas.[172] The successful arguments made to suppress geofencing

[168] For a discussion of the narrow holdings protecting the Fourth Amendment rights of criminal defendants, see *supra* Section I.B; *see also* Hu, *Cybersurveillance Intrusions and an Evolving Katz Privacy Test*, *supra* note at 132 (stating that under *Katz*, courts have analyzed Fourth Amendment challenges by considering targeted law enforcement action, rather than suspicionless mass data tracking programs that encompass all individuals and investigate their data for indicia of suspicion.

[169] *See supra* Part II.A.2 (outlining litigation strategy of criminal defendants seeking to suppress geofencing warrants).

[170] For a detailed discussion of litigation involving ShotSpotter, see *supra* Part I.A.2.

[171] Rickmon v. United States 952 F.3d 876, 884 (7th Cir. 2020) (Wood, J., dissenting).

[172] Rickmon, 952 F.3d at 877 (noting that the reasonable suspicion provided by ShotSpotter was bolstered by the fact that Rickmon's was the only car on the road).

warrants in Illinois and Kansas can serve as a framework for criminal defendants to argue that ShotSpotter alerts provide police officers a license to wrongfully apprehend suspects shortly after an alert is sent out. Litigants who choose to argue that a ShotSpotter alert serves as an anonymous tip without specificity should highlight the circuit split on whether the sound of gunshots can provide reasonable suspicion.[173]

It is also worth acknowledging that the current framework of Fourth Amendment is unlikely to fully capture the success gap between geofencing and gunshot detection software cases.[174] Technological advancement far outpaces the speed at which courts can set comprehensive precedent that protects criminal defendants while providing law enforcement the chance to use technology constitutionally.[175] Thus, as technology continues to evolve, it will present "unprecedented types of society-wide intangible harms that could not have been anticipated at the time *Katz* was decided."[176]

When courts do rule on Fourth Amendment matters—in the context of ShotSpotter, geofencing warrants, or any other technology—precedent often differs from jurisdiction to jurisdiction. For example, until the Supreme Court takes on a relevant case, a criminal defendant in the Fourth or D.C. Circuit is more likely to prevail on a motion to suppress ShotSpotter data than a similarly situated defendant in the Seventh Circuit.[177] Given the narrow holdings of

---

[173] *See supra* Part II.B.1 (discussing the circuit split about whether gunshots constitute reasonable suspicion for a *Terry* stop). The Supreme Court has not spoken definitely on whether gunshots can provide the requisite "reasonable suspicion" for a *Terry* stop. If the Court rules that it does, criminal defendants will need to react accordingly.
[174] *See, e.g.* Hu, *Cybersurveillance Intrusions and an Evolving Katz Privacy Test*, *supra* note at 146 (stating that at oral argument, Justice Harlan noted that the trespass doctrine in Fourth Amendment jurisprudence is "in present day, bad physics as well as bad law, for reasonable expectations of privacy may be defeated by electronic as well as physical invasion.").
[175] *See*, e.g. *id*. at 137 (arguing that *Jones*, *Riley*, and other Fourth Amendment cases demonstrate that the *Katz* privacy test poses limitations on law enforcement's use of new technologies); *see also* Christopher Slobogin, *Policing as Administration*, 165 U. PA. L. Rev. 91, 93—94 (2016).
[176] *See* Hu, *Cybersurveillance Intrusions and an Evolving Katz Privacy Test*, *supra* note 11 at 137 (arguing that a "dramatic revision of Fourth Amendment doctrine is…necessary.").
[177] *See supra* Section I.B.2 (discussing existing precedent related to whether the sound of gunshots constitutes reasonable suspicion for a *Terry* stop).

existing cases favoring criminal defendants—including *Jones*[178] and *Carpenter*[179]—lower courts are less likely to rule in ways that capture the deep-seated issue that these technologies pose.[180]

Academic literature has suggested various tests to shift Fourth Amendment jurisprudence to produce more consistent results. One compelling argument is to move to a test that focuses on society-wide harm instead of how technology harms one individual in particular.[181] This would help resurrect *Katz* in the context of modern technology, making it applicable to contexts like *Jones* and *Carpenter*.[182] This would also create a more fulsome framework, instead of the approach the Supreme Court has taken in making specific rules for specific technologies, opting for exceptions to *Katz* without overruling it altogether.[183] Focusing on society-wide harm would help criminal defendants seeking to combat the use of proximity as a proxy for criminality. In the context of geofencing warrants, such a test would enable criminal defendants argue about the threat posed by law enforcement's ability to pull such invasive data from technology companies.[184] Likewise, criminal defendants seeking to suppress ShotSpotter alerts could argue that allowing law enforcement to stop any individual in the vicinity of an alert is a broad, societal concern under the Fourth Amendment.

Such tests would essentially reverse the *Katz* test, which is still good law.[185] There are less transformative approaches, which can also succeed in protecting criminal defendants against

---

[178] United States v. Jones, 565 U.S. 400 (2012).
[179] Carpenter v. United States, 138 S. Ct. 2206 (2018).
[180] *See Hiding in Plain Sight*, *supra note* 1 at 596 (2017); (stating that "the Fourth Amendment may not be capacious enough to cover [protest] activity, particularly in light of Supreme Court doctrine holding that the motive behind a stop or search is irrelevant to the Fourth Amendment analysis").
[181] *See*, e.g., Hu, *Cybersurveillance Intrusions and an Evolving Katz Privacy Test*, supra note 11 at 137. Justices on the Supreme Court have previously considered shifting the burden to the government. *See* United States v. White, 401 U.S. 745, 793 (1971) (Harlan, J., dissenting) (arguing that the "the burden of guarding privacy in a free society should not be on its citizens; it is the Government that must justify its need to electronically eavesdrop.").
[182] *See* discussion outlining why *Katz* is less able to capture modern-day technology used by law enforcement agencies.
[183] *See supra* Section I (discussing how the Supreme Court evaded the *Katz* test in deciding *Jones*).
[184] For a discussion of the invasiveness of geofencing warrants, see *supra* Part
[185] *See supra* Section I (discussing the treatment of *Katz* following *Carpenter* and *Jones*).

technology that equates proximity with involvement in a crime. For example, justices on the Supreme Court have previously considered shifting the burden to the government—not just to prove that an individual committed a crime, but also that a given technology is permitted under the Fourth Amendment.[186] This is especially compelling in cases involving novel technologies, given the information asymmetry between law enforcement agencies and criminal defendants. Often, criminal suspects are apprehended using technology that is unfamiliar to them. As mediators, courts rarely have precedent that is directly on point to judge new technologies.[187] By shifting the burden to the government to prove such technology is constitutional under by both a subjective and objective standard, criminal defendants would receive protection against the presumption that novel technologies are constitutional.

While such tests would be useful in creating more comprehensive Fourth Amendment jurisprudence, a litigation-based approach requires these issues to be teed up for courts. Thus, until the Supreme Court rules on more Fourth Amendment cases—specifically in the context of geofencing warrants and gunshot detection software—these technologies will continue to pose constitutional concerns. This necessitates an out-of-court approach to bolster Fourth Amendment protections. First, in order provide more comprehensive protection for privacy rights, critics of gunshot detection software can also look to steps taken by critics of geofencing warrants in the policy space. This policy change can in turn place pressure on technology companies to change course.

[186] United States v. White, 401 U.S. 745, 793 (1971) (Harlan, J., dissenting) (arguing that "the burden of guarding privacy in a free society should not be on its citizens; it is the Government that must justify its need to electronically eavesdrop.").
[187] *See supra* Part (discussing the disparate precedent set forth by different courts).

B. Policymaking as a Vehicle for Change

Legislation is often an effective alternative to litigation, especially in the criminal justice system.[188] Even though court-guided common law typically governs how the Fourth Amendment works to protect criminal defendants,[189] policy initiatives have created change in other areas typically guided by judicial precedent.[190] This Section begins by evaluating how critics of geofencing warrants have pushed for policy change. Section III.B.1 first considers legislative proposals at the federal, state, and local level to combat the use of geofencing warrants altogether. Then, this Section explores smaller-scale agency actions, which have sought to hold technology companies accountable without barring geofencing warrants altogether. Section III.B.2 considers the possibility of policy change surrounding the use of gunshot detection software. The Section suggests that critics of ShotSpotter draft model legislation focusing on the constitutional issues that the technology perpetuates. Finally, this Section considers smaller-scale changes—such as proposals to police accountability boards—that can bring about accountability without fully banning the software.

1. Political Scrutiny of Geofencing Warrants

Geofencing warrants have faced increasing political scrutiny, targeted by legislation and agency action. Federal and state policymakers alike have questioned the privacy implications of

[188] Legislation opposing geofencing warrants is just one example of this. Another prominent example is opposition to qualified immunity. Ample academic literature has explored that legislative alternatives are a method to curb the judicially-created doctrine. *See, e.g.* Michael E. Beyda, *Affirmative Immunity: A Litigation-Based Approach to Curb Appellate Courts' Raising Qualified Immunity Sua Sponte*, 89 FORDHAM L. REV. 2693 (2021); Tayler Bingham, *Note: Giving Qualified Immunity Teeth: A Congressional Approach to Fixing Qualified Immunity*, 21 NEV. L.J. 835 (2021); Jim Hilbert, *Improving Police Officer Accountability in Minnesota: Three Proposed Legislative Reforms*, 47 MITCHEL HAMLINE L. REV. 22 (2021).

[189] *See generally* George C. Thomas II, *The Common Law Endures in the Fourth Amendment*, 27 WM. & MARY BILL RTS. J. 85 (2018).

[190] For example, in the past two years, qualified immunity has been barred by states and municipalities, including New Mexico, California, Colorado, Connecticut, and New York City. *See* H.R. 4, 55th Leg., 1st Sess. (N.M. 2021); H.R. 20-1287, 72nd Gen. Assemb., 2d Sess. (Col. 2021); H.R. 6004 Gen. Assemb., Jul. Spec. Sess. (Conn. 2020); New York City, N.Y., City Council Int. No. 2220-A (2021).

geofencing warrants.[191] The Geolocation Privacy and Surveillance (GPS) Act would provide a legal framework providing clear guidelines for the situations in which geolocation information can be accessed and used.[192] The bill—proposed in 2018—did not pass but has sparked ongoing scrutiny of location data pulled from technology companies.[193]

For example, In 2019, the House of Representatives Committee on Energy and Commerce sent an open letter to Google demanding information about Sensor vault and the database's role in responding to geofencing requests.[194] The letter expressed concern that the location history function violated user privacy.[195] Among other queries, the letter questioned Google's executives about the type of information stored in the Sensorvault database, whether other databased stored precise location information, who had access to Sensorvault, and how accurate the information is.[196] While the 2019 letter was the most direct Congressional inquiry into Google's location tracking, Congressional concern reemerged during antitrust technology hearings in July 2020.[197] During that hearing, Google's Chief Executive Officer, Sundar Pichai, argued that Google's transparency reports enabled baseline oversight by Congress.[198]

While most federal action has targeted data collection specifically, there have also been efforts to check law enforcement's power to access this data. For example, the *George Floyd*

---

[191] Legislative backlash to the collection of sensitive location data is not limited to the United Staes. Google has been sanctioned in many countries for its data collection practices. *See* Nathan Newman, *Search, Antitrust, and the Economics of the Control of User Data*. 31 YALE J. ON REG. 401, 435-437 (2014).
[192] Geolocation Privacy and Surveillance Act, H.R. 1062, 115th Cong. (2018).
[193] *Id*.
[194] Letter to Google re Sensorvault, H.R. Rep. Comm. on Energy and Comm., 116th Cong. (2019).
[195] *Id*. (stating that "the potential ramifications for consumer privacy are far reaching and concerning when examining the purposes for the Sensorvault database and how precise location information could be shared with third parties.").
[196] *Id*.
[197] Alfred Ng, *Lawmaker questions Google's CEO about geofence warrants*, CNET (Jul. 29, 2020 12:42 PM), https://www.cnet.com/news/lawmaker-questions-googles-ceo-about-geofence-warrants/ (In questioning Google Chief Executive Officer Sundar Pichai, North Dakota Representative Kelly Armstrong noted that "people would be terrified to know that law enforcement could grab general warrants and get everyone's information everywhere.").
[198] *Id*. Pichai also noted that the company had made minor changes to protect consumer privacy, including deleting location activity after a certain period of time. *Id*.

Justice in Policing Act promises to "improve accountability and transparency" of law enforcement's actions.[199] While the Act is mostly directly at preventing law enforcement's use of force, and does not mention geolocation tracking abilities specifically, it does mention efforts to improve accountability in law enforcement's process of "responding to complaints against law enforcement officers" and "improve evidence collection."[200] This provides an avenue by which the federal government can prevent law enforcement's access to data, even if data collection continues.

State and local legislatures have also sought to act against the use of geofencing warrants. In 2020, New York State Senator Zellnor Myrie introduced the Reverse Location Search Prohibition Act. [201] The text of the Act outlines the concern that such warrants use proximity as a proxy for criminal conduct stating that it "prohibits the search, with or without warrant, of the geolocation data of a group of people who are under no individual suspicion of having committed a crime, but rather are defined by having been at a location at a given time." [202] While New York is the first state to consider banning geofencing warrants altogether, other states and municipalities have sought to prohibit data collection of individuals within the geographical boundaries of a given jurisdiction.[203]

---

[199] George Floyd Justice in Policing Act, H.R. 7120, 116th Cong. (2019-2020)
[200] *Id*.
[201] S. 8183, 2019-2020 Leg. Sess. (N.Y. 2020).
https://www.nysenate.gov/legislation/bills/2019/s8183
[202] *Id*. At the time of writing, the Bill remains in committee.
[203] The New York City Council proposed an amendment to the New York City administrative code, which would create a private right of action against companies who share location information with third parties if the location information is gathered from a device in New York city. N.Y.C. Council, Int. 1632- 2019 (July 23, 2019). California implemented legislation similar to Europe's GDPR, granting residents a broad range of rights related to how their personal data is used. CAL. CIV. CODE §§ 1798.100–.199 (effective Jan. 1, 2020). Illinois has proposed the Geolocation Privacy Protection Act, which would create clear guidelines for geolocation data that can be adapted for a federal statute. H.B. 3449, 100th Gen. Assemb., Reg. Sess. (Ill., 2017). The bill was vetoed because of concerns that the bill would lead to job loss, without improving protections. *See* Robert Channick, *Rauner Vetoes Geolocation Privacy Bill Aimed at Protecting Smartphone Users*, CHICAGO TRIBUNE (Sept. 22, 2017), http://www.chicagotribune.com/business/ct-bizgeolocation-privacy-rauner-veto-20170922-story.html.

While most policy action directed at geofencing warrants and location-based tracking has occurred in legislatures, agencies have expressed concerns about location data shared with third parties. Most notably, the Federal Trade Commission (FTC) has monitored developments in the process, releasing a policy statement on "negative option marketing"—which clearly discloses when data can or will be shared with third parties.[204] While the FTC has not specifically addressed the intersection of law enforcement and data collection, the agency has settled with several private sector companies.[205] In prepared testimony to Congress, Jessica Rich, then-Director of the FTC's Bureau of Consumer Protection noted that geolocation information could provide answers to questions like "what place of worship do you attend? Did you meet with a prospective business customer?"[206] In addition, the Government Accountability Office (GAO) issued a report outlining the privacy concerns associated with providing location data to unknown third parties, including possibility of consumer location tracking and surveillance.[207]

Of course, these policy changes do not address every concern that geofencing warrants pose. For example, a great deal of legislature focuses merely on the data collection practices of technology companies, without considering other avenues by which law enforcement officials

[204]Enforcement Policy Statement Regarding Negative Option Marketing (Oct. 28, 2021), https://www.ftc.gov/system/files/documents/public_statements/1598063/negative_option_policy_statement-10-22-2021-tobureau.pdf.
[205] *See*, e.g., Press Release, U.S. Fed. Trade Comm'n, Android Flashlight App Developer Settles FTC Charges It Deceived Consumers (Dec. 5, 2013), https://www.tc.gov/news-events/ press-releases/2013/12/android-lashlightapp-developer-settles-tc-charges-it-deceived (noting a settlement because the company shared individual location information and shared it with third parties before users had a chance to accept an end user agreement); Press Release, U.S. Fed. Trade Comm'n, Mobile Advertising Network InMobi Settles FTC Charges It Tracked Hundreds of Millions of Consumers' Locations without Permission (June 22, 2016), https://www. tc.gov/news-events/press-releases/2016/06/ mobile-advertising-network-inmobi-settlestc-charges-it-tracked (stating that InMobi would pay $950,000 in civil penalties after tracking consumers' location without disclosure).
[206] The Location Privacy Protection Act of 2014: Hearing on S. 2171 before the Subcomm. for Privacy, Tech. & the Law of the S. Comm. on the Judiciary, 113th Cong. (2014) (statement of Jennifer Rich, Director, Bureau of Consumer Protection), https://www.tc.gov/ system/iles/documents/public_statements/313671/140604locationprivacyact.pdf.
[207] U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-903, MOBILE DEVICE LOCATION DATA: ADDITIONAL FEDERAL ACTIONS COULD HELP PROTECT CONSUMER PRIVACY (2012), http://www.gao.gov/ assets/650/648044.pdf.

can track an individual's location. Privacy advocates have recommended that Congress create a statutory structure requiring an "escalating set of procedures" to authorize any sort of data collection that the government may have access to.[208] Regardless, efforts to minimize the use of geofencing have kept pressure on companies to reevaluate their privacy practices.[209] This can play an important role in asking the technology to self-regulate.[210]

2. Pushing for Policy change in Gunshot Detection Software

Opposition to geofencing warrants can provide a framework for policy change in the context of gunshot detection software. At present, there is no pending legislation as sweeping as attempts to bar geofencing warrants in New York City. However, municipalities have recognized the need to create accountability mechanisms when the technology is used. For example, when the New York City Police Department originally began using ShotSpotter technology, New York Attorney General Letitia James introduced a public advocate bill proposing a change to the administrative code requiring the NYPD to report on information detected on ShotSpotter technology.[211]

ShotSpotter is typically funded by taxpayer resources, [212] which can be a starting point for citizens to demand accountability for how the technology is used. The resources poured into

---

[208] Christopher Slobogin, *Making the Most of United States v. Jones in a Surveillance Society*: *A Statutory Implementation of Mosaic Theory*, 8 DUKE J. CONST. L. & PUB. POL'Y (Special Issue) 1, 4-5 (2012) (proposing that a "general public search"—such as setting up CCTV cameras for general public safety surveillance—would not require a warrant or other court order at all, but would require that the group being surveilled have had access to a transparent political process that led to the installation of the camera).

[209] For an in-depth discussion about the efforts of technology companies to reevaluate privacy practices, *see infra* Section III.

[210] *Id*.

[211] New York City, N.Y., City Council Int. No. 0665-2015 (2015). The legislation was filed at the end of session, and was left unenacted. *Id*.

[212] While data is not publicly available about the exact amount of taxpayer dollars spent on ShotSpotter, a majority of the company's contracts come from law enforcement contracts financed by local taxes or federal grants. *See* Matt Drange, *We're Spending Millions On This High-Tech System Designed to Reduce Gun Violence. Is It Making a Difference?*, FORBES (Nov. 17, 2016); Alayna Alvarez, *Denver may spend millions more on controversial ShotSpotter tech*, AXIOS (Dec. 21, 2021); Todd Feathers, *Police Are Telling ShotSpotter to Alter Evidence From Gunshot-Detecting AI*, VICE (Jul. 26, 2021 at 9:00 AM).

ShotSpotter can take away from community policing efforts. A study published in the *Journal of Urban Health* argues that ShotSpotter is typically used as a mechanism to respond quickly to crime but does not accurately predict future crime.[213] Therefore, ShotSpotter can pull resources away from preventative measures prevalent in community policing models. While the software may be able to identify "neighborhood hot spots," this can be done just as easily with existing crime statistics.[214]

Given there is no pending legislation opposing gunshot detection software, privacy and civil rights advocates can consider drafting model legislation, using the framework of legislation regulating geofencing warrants. In the geofencing context, successful policy efforts were directed at encouraging open disclosure, pushing for increased accountability.[215] In the context of gunshot detection software, legislation demanding accountability may include provisions about the protections that criminal defendants have when a ShotSpotter alert is not corroborated by eyewitness testimony or any additional evidence. Just as legislation opposing geofencing warrants has identified the legal and constitutional concerns that the practice raises, draft legislation should combat the Fourth Amendment concerns ShotSpotter raises.[216]

Even if sweeping legislation is infeasible, citizens can take smaller steps to encourage law enforcement agencies or police oversight boards to enforce these policies. Police accountability

---

[213] Mitchell Doucette et al., *Impact of ShotSpotter Technology on Firearm Homicides and Arrests Among Large Metropolitan Counties: a Longitudinal Analysis, 1999-2016*, 98 J. URBAN HEALTH 5 (2020). The study notably identifies three areas of policing in which ShotSpotter may be used—(1) rapid response, (2) problem-solving, and (3) crime prevention. *Id*. ShotSpotter typically falls into the rapid response categories, since the software is meant to alert law enforcement agencies of an ongoing incident. *Id*.

[214] CHI. OFFICE OF THE INSPECTOR GENERAL, THE CHICAGO POLICE DEPARTMENT'S USE OF SHOTSPOTTER TECHNOLOGY (2021), https://igchicago.org/wp-content/uploads/2021/08/Chicago-Police-Departments-Use-of-ShotSpotter-Technology.pdf.

[215] For more detail on these policy initiatives, *see supra* Part.

[216] Specifically, legislation should acknowledge that gunshot detection software can serve as (1) a general warrant to search any individual once an alert sounds; or (2) an anonymous tip lacking specificity.*See supra* Part (discussing the privacy concerns ShotSpotter poses).

boards can develop policies prior to implementation, including mandating ongoing training and creating accountability mechanisms when the technology is used.[217] These steps—while minor—can help law enforcement agencies evaluate the privacy implications of the technology before it is implemented. For example, the Urban Institute recommends that law enforcement supervisors develop clear policies surrounding the use of gunshot detection prior to implementation.[218] Such policies could also avoid confusion on when a ShotSpotter alert can be used to apprehend a criminal suspect.[219] Of note is the fact that law enforcement agencies often vary on whether officials should locate witnesses and search for shell cases.[220] More specific policies regarding neighborhood canvassing, or requiring physical evidence to corroborate software detection can help avoid many of the concerns that ShotSpotter poses when analogized to an anonymous tip lacking reasonable suspicion.[221]

Whether policy change is encouraged via police accountability mechanisms or legislatures, it is likely to encourage a broader discourse about transparency when alerts are used to apprehend criminal suspects.[222] Sustained concerns about the proximity as a proxy for criminality with regards to ShotSpotter, will likely lead to both policy change and industry action, as it has in the case of geofencing warrants.[223] While legislative and policy shifts can help draw scrutiny of

---

[217] Nancy G. La Vigne et al., *Implementing Gunshot Detection Technology*, URBAN INSTITUTE (2019).
[218] *Id*. at 9.
[219] *Id*. at 9. The study examined the practices of three different law enforcement agencies utilizing gunshot detection. While each of the agencies considered gunshot detection a "high priority," there was considerable variation between policies related to canvassing neigbhorhoods, searching for shell casings, and locating witnesses. *Id*. *See also* James Czerniawski & Connor Boyack, *Reviewing the Privacy Implications of Law Enforcement Access to and Use of Digital Data*, 5 UTAH J. CRIM. L. 73, 86 (2021) (citing an example of an individual who was apprehended as a criminal suspect on the basis of DNA technology which was originally uploaded to a private database).
[220] La Vigne et al., *Implementing Gunshot Detection Technology*, *supra* note
[221] *Id*. Specifically, such practices would increase the presence of physical evidence and eye-witness testimony to corroborate the use of ShotSpotter. Thus, they could help prevent false arrests and ensure that gunshot detection software is accompanied by further evidence.
[222] *Id*.
[223] *See infra* Section III.C (discussing the role that technology companies play in bringing about change).

ShotSpotter, it may be difficult to create a fulsome strategy protecting criminal defendants without private sector buy-in.[224]

C. Industry Buy-In as a Vehicle for Change

Industry buy-in provides a powerful addition to litigation and policy change. Particularly because the pace of technological change is faster than corresponding litigation and legislation,[225] companies deploying this technology play an important role in preventing Fourth Amendment violations.[226] As law enforcement agencies adopt emerging technologies, companies deploying these technologies become crucial mediators between law enforcement and the public.[227] Increasingly, advocates point to the need for Value Sensitive Design—a "self-regulatory design theory" to "account for human values in a principled and comprehensive manner throughout the design process" of new technology.[228] However, given the information asymmetry between technology companies and courts or policymakers, it is difficult to find the impetus for change.[229] In successful cases of technology regulation, industry action picks up

[224] *See Hiding in Plain Sight*, *supra* note at 559 (2017) ("But a patchwork quilt of state statutes granting varying degrees of privacy protection is not adequate when foundational Fourth Amendment rights are at stake. Such a system would leave a fraction-likely a large fraction-of citizens deprived of critical constitutional guarantees.").
[225] *See* Hilary Silvia & Nanci K. Carr, *When Worlds Collide: Protecting Physical World Interests against Virtual World Malfeasance*, 26 MICH. TECH. L. REV. 279, 281 (2020) (noting that "it is beyond dispute that protective legislation will be unable to keep up, much less catch up, with technological changes.").
[226] *See id* (noting that "the burden of anticipating and addressing issues presented by emerging technologies will ultimately fall upon the businesses responsible for generating them.").
[227] As noted by Jennifer Granick, a surveillance and cybersecurity counsel at the American Civil Liberties Union, "we think of the judiciary as being the overseer, but as the technology has gotten more complex, courts have had a harder and harder time playing that role. We're depending on companies to be the intermediary between people and the government." *See* Valentino-DeVries, *Google's Sensorvault Is a Boon for Law Enforcement*, *supra* note.
[228] Batya Friedman et al., Value Sensitive Design: Theory and Methods 1 (UW CSE Technical Report 02-12-01, 2002); Hilary Silvia & Nanci K. Carr, *When Worlds Collide: Protecting Physical World Interests against Virtual World Malfeasance*, 26 MICH. TECH. L. REV. 284 (2020) (noting that "this theory places human values squarely at the center of how technology itself is designed.") [hereinafter *When Worlds Collide*].
[229] This has been coined the difficulty of creating "action in the absence of accountability." *When Worlds Collide* 282.

where litigation leaves off.[230] In these cases, companies do not admit liability, but agree to change privacy policies, thereby curbing damage.[231]

Market conditions can also affect the willingness of companies to self-regulate. Over the past few years, investors have begun to focus more on a company's environmental, social, and governance (ESG) efforts, instead of merely on financial returns.[232] In this environment, avoiding liability while responding to consumer concerns is especially important, since it can affect how the company is perceived at market. In October 2021, the Securities and Exchange Commission (SEC) issued guidance to narrow the circumstances in which companies can choose not to respond to these concerns by institutional investors.[233] This updated guidance appears to reflect the heightened focus institutional investors are placing on a company's social commitments. Critics of geofencing warrants have successfully met the technology industry in demanding change, providing a blueprint for ShotSpotter's critics.

This Part examines how critics of geofencing warrants have successfully exerted pressure on technology companies to exhibit opposition to geofencing warrants—including via amicus briefs

---

[230] For example, a recent settlement between Niantic—the creator of Pokémon Go—settled with a nationwide class of individuals alleging trespass and nuisance. Pls.' Mot. Supp. Prelim. Approval Settlement in re Pokémon Go Nuisance Litig., No. 3:16-cv-04300, at 1 (Feb. 14, 2019) (Proposed settlement class includes "all persons in the United States who own or lease property within 100 meters of any location that Niantic has designated, without prior consent of such property owner or lessee, as a Pokéstop of Poké Gym in the Pokémon Go mobile application.").
[231] See Order Approving Class Action Settlement Agreement in re Pokémon Go Nuisance Litig., No. 3:16-cv-04300, at 3-4 (Aug. 30, 2019); *see also* Silvia & Carr, *When Worlds Collide: Protecting Physical World Interests against Virtual World Malfeasance*, *supra* note at 285.
[232] Ross Kerber and Simon Jessop, *Analysis: How 2021 became the year of ESG investing*, REUTERS, Dec. 23, 2021, https://www.reuters.com/markets/us/how-2021-became-year-esg-investing-2021-12-23/ (citing that the Sustainable Investments Institute found that support for social and environmental proposals at shareholder meetings in the United States rose from 21% in 2017, to 27% in 2020, and further to 32% in 2021). Catherine Winner, global head of stewardship of Goldman Sachs Group Inc.'s asset management division, told *Reuters News* that "investors are no longer satisfied with companies delivering shareholder returns without doing more for the environment and society." *Id*.
[233] SEC Staff Legal Bulletin No. 14L (CF) (Nov. 3, 2021). SEC Rule 14a-8(i)(7)—or the "ordinary business exception"—permits a company to exclude a shareholder proposal that "deals with a matter relating to the company's ordinary business operations." *Id*. However, the initial rule highlights an exception for certain proposals raising significant social policy issues. The guidance suggests that the initial rule places "an undue emphasis on evaluating the significance of a policy issue to a particular company at the expense of whether the proposal focuses on a significant social policy." *Id*.

and transparency reports.[234] Finally, this Section considers how critics of gunshot detection software bring about accountability when the technology is used.[235]

1. *Industry Response to Geofencing Warrants*

Civil rights organizations have called on technology companies to acknowledge the role they play in protecting—or eroding—privacy rights guaranteed under the Fourth Amendment. For example, a coalition of civil rights organizations wrote an open letter stating that geofencing warrants "circumvent constitutional checks on police surveillance, creating a virtual dragnet."[236] The letter emphasized the intermediary role Google plays, stating that the company is "uniquely situated to provide public oversight of these abusive practices."[237]

Google has responded by expressing some opposition to these warrants. In a brief supporting neither side in a *United States v. Chatrie*, Google stated that it considers geofencing warrants a "broad and intrusive search"—more invasive than cell tower dumps.[238] Google's amicus brief is the first in which a technology company has openly resisted the use of geofencing warrants. This is a minor step but signals a shift in the industry to embrace privacy rights. Several companies have since published transparency reports disclosing how many warrant requests they have received.[239] Sometimes, companies publish reports of how many warrant requests they have

[234] Brief of Amicus Curiae Google LLC in Support of Neither Party Concerning Defendant's Motion to Suppress Evidence From a "Geofence" General Warrant at 3, United States v. Chatrie, No. 3:19-cr-00130-MHL (2021); *See Supplemental Information on Geofence Warrants in the United States*, *supra* note.
[235] This includes both friendly tactics, like requesting to work with the company. It also includes more hostile tactics, like reaching out to institutional investors regarding ESG mechanisms. *See infra* Section III.C (discussing methods to push for industry buy-in).
[236] Re: Need for Improved Transparency on "Geofence" and "Keyword Warrants," Surveillance Technology Oversight Project (Dec. 8, 2020).
[237] *Id*.
[238] Brief of Amicus Curiae Google LLC in Support of Neither Party Concerning Defendant's Motion to Suppress Evidence From a "Geofence" General Warrant at 3, United States v. Chatrie, No. 3:19-cr-00130-MHL (2021). At the time of writing, the district court has yet to decide whether to grant the defendant's motion to suppress information pulled from the geofencing warrant in that case.
[239] *See Supplemental Information on Geofence Warrants in the United States*, *supra* note 237; *see also* Law enforcement demands for customer data, https://verizon.turtl.co/story/us-transparency-report-1h-2021/page/2/3, Verizon (last visited Oct. 20, 2021).

received, without categorizing when a warrant qualifies as a "geofencing" warrant.[240] However, these transparency reports demonstrate accountability to consumers about a company's interactions with law enforcement agencies. Other companies—including Facebook and Lyft—have either refused to comply or placed limitations on how they reply to these warrants.[241]

These measures require technology companies to self-regulate how they collect, store, and share data. Often, efforts to self-regulate can lead to a "race to the bottom" by which "business narrowly interpret privacy laws to gain a competitive advantage."[242] Ample scholarship has stressed that "there is little incentive for the design of systems which restrict collection of personal data."[243] For this reason, industry action alone cannot guide privacy protection. Instead, it should be used in conjunction with policy and legal change.

2. ShotSpotter Industry Response

Despite the privacy concerns its technology poses, ShotSpotter has taken little action to protect citizens in the jurisdictions where its technology is deployed. There is an important gap between the consumer base of technology companies and ShotSpotter. While technology companies that collect user data are mainly serving end users, companies like ShotSpotter's customers are law enforcement agencies.

---

[240] For example, Verizon published a report noting tha the company received 10,631 warrant requests in the second half of 2017 and 15,169 in the first half of 2021. Law enforcement demands for customer data, https://verizon.turtl.co/story/us-transparency-report-1h-2021/page/2/3, Verizon (last visited Oct. 20, 2021).
[241] Facebook has acknowledged that the company receives geofencing warrant requests, but stated that it is unable to fulfill them because the company has placed limitations on how data is stored. See Albert Fox Cahn, *This Unsettling Practice Turns Your Phone into a Tracking Device for the Government*, FAST CO. (Jan. 17, 2020), https://www.fastcompany.com/90452990/this-unsettling-practice-turns-your-phone-into-a-tracking-device-for-the-government. Lyft has stated that it would comply with such requests if they did not target all users in a given geographic radius. *Id*.
[242] See Yana Welinder, A Face Tells More Than A Thousand Posts: Developing Face Recognition Privacy in Social Networks, 26 HARV. J.L. & TECH. 165, 193-95 (2012) (arguing that though the FTC has found Facebook's practices to "unfair and deceptive," the narrow standards in place do not require companies to make meaningful changes).
[243] Lisa Madelon Campbell, *Internet Intermediaries, Cloud Computing and Geospatial Data: How Competition and Privacy Converge in the Mobile Environment*, 7 NO. 2 COMPETITION L. INT'L 60, 62 (2011) (stating that there is no "effective deterrent to unfettered data collection, especially when these businesses can experience significant financial windfall from their unauthorized data collection practices.").

This does not fully preclude critics from working directly with ShotSpotter to demand change, as critics of geofencing warrants did in sending an open letter to Google.[244] In fact, ShotSpotter has previously been receptive to working with criminal justice reform groups. In 2019, ShotSpotter requested that the New York University School of Law Policing Project conduct an audit of its privacy measures focused solely on voice surveillance implications.[245] ShotSpotter made a number of changes to further prevent voice surveillance capabilities after the report was published, including (1) substantially reducing the duration of audio stored on the company's sensors; (2) committing to denying requests and challenging subpoenas for audio; (3) committing to not sharing specific sensor location with law enforcement agencies; and (4) improving internal controls regarding audio access.[246] In that case, ShotSpotter provided access to sensitive information, even though implications of that access seems counterintuitive to some of the company's objectives. The company has showed some sensitivity to the negative media coverage surrounding the privacy implications of the technology.[247] For example, in 2021, ShotSpotter filed a lawsuit claiming that media reports perpetuated false claims about the company.[248] This may provide critics a chance to work with ShotSpotter to evaluate how law enforcement uses the technology.

Critics can also turn to more aggressive tactics, especially given the heightened focus on ESG concerns.[249] Similar to many of the technology companies stating opposition to geofencing warrants—like Facebook and Google—ShotSpotter is a publicly traded company.[250] At the most

---

[244] *See* Re: Need for Improved Transparency on "Geofence" and "Keyword Warrants," *supra* note 239.
[245] POLICING PROJECT AT NYU LAW, PRIVACY AUDIT & ASSESSMENT OF SHOTSPOTTER, INC.'S GUNSHOT DETECTION TECHNOLOGY (Jul. 2019).
[246] *Id*.
[247] *See* Press Release, ShotSpotter Files Defamation Complaint Against VICE Media (Oct. 12, 2021), https://ir.shotspotter.com/press-releases/detail/228/shotspotter-files-defamation-complaint-against-vice-media.
[248] In 2021, ShotSpotter filed a lawsuit claiming that VICE Media published false claims about the company. *Id*.
[249] *See supra* Part III.C.1. (discussing heightened ESG concerns).
[250] *See About ShotSpotter*, https://www.shotspotter.com/company/ (last visited Jan. 18, 2022).

combative level, this means that privacy and civil rights advocates can appeal to institutional or other investors to reveal the concerns that ShotSpotter poses.[251] For larger companies, this has resulted in activist calls for change. As institutional investors continue to focus on a company's ESG mechanisms,[252] it is worth placing pressure on those investors to challenge companies to better track and protect the rights guaranteed by the Fourth Amendment. Clearly, there has been movement on this front for large technology companies like Google. It may be tougher to enact the same progress in smaller companies like ShotSpotter, since institutional investors may place less of a focus on those companies than on companies that have a higher market cap.

CONCLUSION

Without proper boundaries, law enforcement's use of emerging technologies to apprehend suspects based on location alone raises serious Fourth Amendment concerns. The Supreme Court's reasoning in *Jones* and *Carpenter* outline a framework that criminal defendants have used to challenge geofencing warrants. Criminal defendants apprehended based on a ShotSpotter alert alone should argue that the technology essentially serves as a general warrant, lacking the specificity needed for a *Terry* stop. Given the state of Supreme Court jurisprudence regarding law enforcement's use of technology, litigation alone is unlikely to protect criminal defendants. Thus, a comprehensive approach to emerging technology that use proximity as a proxy for criminality involves a policy-based approach. These policies should focus on the accountability of both technology companies and law enforcement agencies. Finally, critics of these technologies should seek to elicit industry buy-in for lasting policy change.

---

[251] For larger companies, this has resulted in activist calls for change. For example, activists called on Union Pacific to publicize workforce diversity statistics. *Id*. It is worth noting that there are important measures on this front that are not passed. For example, investor pressure on Amazon to review how it addresses racial justice and equity failed in 2021.

[252] *See supra* Section III.C.1 (discussing increased focus on a company's social commitments.)

Applicant Details

First Name	**Xaveria**
Last Name	**Mayerhofer**
Citizenship Status	**U. S. Citizen**
Email Address	**xmayerhofer@unm.edu**
Address	**Address** **Street** **7319 Laguna Niguel Dr NE** **City** **Albuquerque** **State/Territory** **New Mexico** **Zip** **87109** **Country** **United States**
Contact Phone Number	**5059330978**

Applicant Education

BA/BS From	**Brandeis University**
Date of BA/BS	**December 2020**
JD/LLB From	**The University of New Mexico School of Law** **http://lawschool.unm.edu/**
Date of JD/LLB	**May 14, 2024**
Class Rank	**School does not rank**
Does the law school have a Law Review/Journal?	**Yes**
Law Review/Journal	**No**
Moot Court Experience	**No**

Bar Admission

Prior Judicial Experience

Judicial Internships/Externships	**Yes**
Post-graduate Judicial Law Clerk	**No**

Specialized Work Experience

Recommenders

Nathaniel, Gentry
staff@jgentrylaw.com
5057640111
Racehorse, Vanessa
vanessa.racehorse@law.unm.edu
England, Scott
scott.england@law.unm.edu
505-277-2646

This applicant has certified that all data entered in this profile and any application documents are true and correct.

Xaveria Mayerhofer

xmayerhofer@law.unm.edu | (505) 933-0978

June 10, 2023

The Honorable Jamar K. Walker
Walter E. Hoffman United States Courthouse
600 Granby Street
Norfolk, Virginia 23510

Dear Judge Walker:

I am a 3L at the University of New Mexico School of Law writing to apply for a 2024-2025 clerkship in your chambers. Although I was originally applying for one year clerkships, I am not opposed to extending the position for an additional year. I am in the top 5% of my class, a member of the *Tribal Law Journal*, and devoted to bettering myself and my community through the legal profession. As a military child, I have had the privilege of living in cities across the U.S. However, upon graduating, it is my desire to relocate to Virgina. and build my career there. As a clerk, I will contribute a unique perspective, a genuine interest in the law, and a diligent work ethic. It is my goal to begin my career with a clerkship in your chambers.

My varied work history and substantial research experience will facilitate my success as a clerk. This past spring, I interned with the U.S. Attorney's Office where I gained experience in federal law, including the U.S. Sentencing Guidelines and issues of jurisdiction. This summer, I am clerking for Judge George Eichwald in the Thirteenth Judicial District Court of New Mexico. In this position, I am refining my research, writing, and analytical skills while balancing a diverse and busy docket, which will prepare me to be a successful federal clerk. I look forward to taking on the challenges a clerkship offers and hope to do so in your chambers.

I am particularly interested in clerking for you due to your background at the Office of the U.S. Attorney. After my clerkship, I hope to become an assistant U.S. attorney. I will gain substantial skills and knowledge by learning from your experience. I am eager to learn from both the criminal and civil dockets to augment my legal knowledge and abilities as an advocate. I look forward to strengthening my skills of legal analysis, broadening my knowledge of federal law, and serving the people of Virginia.

Please let me know if there is any other information I can provide. I would enjoy the opportunity to interview with you, and I am free to do so at your convenience.

Thank you for your time and consideration.

Respectfully yours,

Xaveria Mayerhofer

Xaveria Mayerhofer

xmayerhofer@law.unm.edu | (505) 933-0978

EDUCATION

University of New Mexico School of Law, Albuquerque, NM
Juris Doctor, expected May 2024
GPA: 3.83
Dean's List
CALI Awards: Constitutional Rights; Indian Law Appellate Advocacy
Certificate of Concentration in Indian Law (in progress)
Involvement:
Tribal Law Journal, staff
Criminal Law Tutor, Profess Joshua Kastenberg, Fall 2023
Research Assistant to Professor Allison Freedman (*Economic Justice*), Summer/Fall 2023
Research Assistant to Professor Joseph Schremmer (*Property, Oil & Gas*), Fall 2022
Gene Franchini New Mexico High School Mock Trial Judge
Southwest Indian Law Clinic (forthcoming), Spring 2024

Brandeis University, Waltham, MA
Bachelor of Arts, *cum laude*, in Linguistics, December 2020
Honors: Commitment to Service Award
Near Eastern Judaic Studies prize for Excellence in Arabic

EXPERIENCE

Thirteenth Judicial District Court, Bernalillo, NM — May 2023 - July 2023
Judicial Clerk to Judge George P. Eichwald

Office of the U.S. Attorney, Albuquerque, NM — Jan. 2023 - May 2023
Law Clerk, Department of Indian Country Crimes

Pueblo of Isleta Appellate Court, Pueblo of Isleta, NM — July 2022 - Oct. 2022
Judicial Clerk

New Mexico State Ethics Commission, Albuquerque, NM — May 2022 - June 2022
Law Clerk

The Gentry Law Firm, Albuquerque, NM — Dec. 2020 - present
Law Clerk; New Hire Trainer

Mental Health Legal Advisors Committee, Boston, MA (virtual) — Aug. 2020 - Dec. 2020
Volunteer Research and Intake Intern

The Right to Immigration Institute, Waltham, MA — Aug. 2018 - Dec. 2020
Volunteer Immigration Advocate

Second Judicial District Attorney, Albuquerque, NM — May 2019 - Aug. 2019
Crime Strategies Unit Intern

Xaveria N Mayerhofer
UNM ID: 101-92-8499
DATE OF BIRTH: 04-DEC-1998

THE UNIVERSITY OF NEW MEXICO
OFFICE OF THE REGISTRAR
ALBUQUERQUE, NEW MEXICO 87131-0001

PAGE: 1
DATE ISSUED: 06-JUN-2023

Course Level: Law School

Current Program
Juris Doctor
Program : Juris Doctor
College : School of Law
Campus : Albuquerque/Main
Major : Law

SUBJ	NO.	COURSE TITLE	CRED	GRD	PTS	R
INSTITUTION CREDIT:						
Fall 2021						
School of Law						
LAW	502	Contracts I	3.00	A	12.00	
LAW	504	Criminal Law	3.00	A	12.00	
LAW	506	Elements Legal Argumentation I	3.00	B+	9.99	
LAW	510	Torts	3.00	A-	11.01	
LAW	593	T: Lab	3.00	A-	11.01	I
Ehrs: 15.00 GPA-Hrs: 15.00 QPts: 56.01 GPA: 3.73						
Spring 2022						
School of Law						
LAW	501	Intro to Constitutional Law	3.00	A-	11.01	
LAW	508	Property I	3.00	A	12.00	
LAW	512	Civil Procedure I	3.00	A-	11.01	
LAW	513	Elements Legl Argumentation II	3.00	A-	11.01	
LAW	584	Indian Law	3.00	A-	11.01	
LAW	593	T: Intro to Legal Research	1.00	A	4.00	I
Ehrs: 16.00 GPA-Hrs: 16.00 QPts: 60.04 GPA: 3.75						
Fall 2022						
School of Law						
LAW	526	Constitutional Rghts	3.00	A	12.00	
LAW	593	T: Applied Legal Research	2.00	A	8.00	I
LAW	593	T: Ind Law Appellate Advoc(DC)	2.00	A	8.00	I
LAW	593	T: Taking&DefendingDepositions	2.00	CR	0.00	I
LAW	593	T: Supre Court Decision-making	2.00	A	8.00	I
LAW	632	Evidence & Trial Practice	6.00	A-	22.02	
Ehrs: 17.00 GPA-Hrs: 15.00 QPts: 58.02 GPA: 3.86						
Spring 2023						
School of Law						
LAW	529	Crim Pro I-4th 5th 6th Amend	3.00	A+	12.99	
LAW	550	Mediation	2.00	CR	0.00	

********** CONTINUED ON NEXT COLUMN **********

SUBJ	NO.	COURSE TITLE	CRED	GRD	PTS	R
Institution Information continued:						
LAW	593	T: Indn Child, Yth & Fam Law	2.00	A-	7.34	I
LAW	593	T: Indn Land Rts & Clm (WS)	2.00	A	8.00	I
LAW	593	T: Civil Rights Litigation	2.00	B+	6.66	I
LAW	605	Advanced Constitutional Rights	3.00	A	12.00	
LAW	750	Ethics	3.00	A+	12.99	
Ehrs: 17.00 GPA-Hrs: 15.00 QPts: 59.98 GPA: 3.99						
Fall 2023						
IN PROGRESS WORK						
LAW	552	Federal Jurisdiction	3.00	IN PROGRESS		
LAW	593	T: Tribal Law Jrnl Seminar(WS)	2.00	IN PROGRESS		
LAW	595	Tribal Law Journal I-Staff	1.00	IN PROGRESS		
LAW	606	Civil Procedure II	3.00	IN PROGRESS		
LAW	608	Property II	3.00	IN PROGRESS		
LAW	614	Administrative Law	3.00	IN PROGRESS		
In Progress Credits 15.00						

********** TRANSCRIPT TOTALS **********

	Earned Hrs	GPA Hrs	Points	GPA
TOTAL INSTITUTION	65.00	61.00	234.05	3.83
TOTAL TRANSFER	0.00	0.00	0.00	0.00
OVERALL	65.00	61.00	234.05	3.83

********** END OF TRANSCRIPT **********

ISSUED TO:

Xaveria N. Mayerhofer
xmayerhofer@unm.edu

UNOFFICIAL ACADEMIC TRANSCRIPT

NOT TO BE RELEASED
TO THIRD PARTY WITHOUT
STUDENT CONSENT

THE GENTRY LAW FIRM

1100 Tijeras Ave NW ▪ Albuquerque, New Mexico 87102
(505) 764-0111 ▪ staff@jgentrylaw.com

Dear Judge Walker,

It is with great pleasure that I write to recommend Xaveria Mayerhofer for a clerkship. I originally hired Xaveria as an undergraduate intern for the summer of 2018. She subsequently returned as a full time employee and has continued to work part time during her legal education. Throughout her tenure, Xaveria has consistently sought new challenges, assumed additional responsibilities and cultivated skills that will make her a successful law clerk.

Xaveria is conscientious, detail-oriented, and reliable. She balances assignments from three attorneys for dozens of clients. For one client, Xaveria researched over two hundred businesses, drafted subpoenas to their registered agents, and personally served half of them to save the client time and money. She is always concerned with producing the best work possible, even while balancing competing priorities. During her tenure, Xaveria has been a full-time student and completed multiple internships with other legal organizations. Despite her many commitments, Xaveria maintains the high quality of her work and meets every deadline. Additionally, her research and writing abilities have continuously improved since 2018. She has progressed from writing basic pleadings to composing advanced legal arguments for persuasive motions, findings of fact and conclusions of law, and legal memoranda. In fact, due to the caliber of her work, I tasked Xaveria with creating a training manual for new employees, which she has used to train three new hires to date. Xaveria has not only dedicated herself to her studies and work, but also uses her experience and abilities to assist her colleagues. Her commitment to the legal profession and her eagerness to learn will make her an exceptional asset to any organization of which she is a part.

I unreservedly recommend Xaveria to Your Honor. Her work ethic, professionalism, and dedication to the law are unparalleled. Xaveria is an invaluable employee at my firm, and I am confident she will excel as a law clerk in your office as she has in mine.

Sincerely,

Nathaniel Gentry, esq.

June 12, 2023

The Honorable Jamar Walker
Walter E. Hoffman United States Courthouse
600 Granby Street
Norfolk, VA 23510-1915

Dear Judge Walker:
I write this letter to express my support for Xaveria Mayerhofer in her application for a clerkship in your chambers. I am currently an Assistant Professor of Law at the University of New Mexico School of Law (UNMSOL), where I teach in the Law and Indigenous Peoples Program. I have worked with Xaveria in my Fall 2022 Indian Law Appellate Advocacy course, and she is currently enrolled in my Spring 2023 Indian Children, Youth and Families Law course.

Xaveria earned the highest grade in the Indian Law Appellate Advocacy class based on her superb performance during oral arguments and her well-written brief. In class, Xaveria is generally reserved, but she is bright and articulate when called upon. She is also professional, welcoming of constructive feedback, and has the clear desire and ability to complete high caliber work. The final written work product for the Indian Law Appellate Advocacy course was an appellate brief that discussed a constitutional challenge to the Indian Child Welfare Act, which required significant research on a myriad of sources related to Indian law, including statutes, case law, and legislative history. In her final brief, Xaveria showed firm legal research and writing skills, and she was able to effectively synthesize the landmark cases at issue while applying the rules to the facts at issue. Xaveria also had an exceptional performance during the final oral arguments, where she gracefully handled complex questions from a panel of current and former New Mexico Court of Appeals' judges.

I am confident that Xaveria Mayerhofer is a good candidate for a judicial clerkship, and I am happy to give her my recommendation. Please do not hesitate to contact me if you have any additional questions or require any additional information.

Sincerely,

Vanessa Racehorse
Assistant Professor of Law
University of New Mexico School of Law

June 12, 2023

The Honorable Jamar Walker
Walter E. Hoffman United States Courthouse
600 Granby Street
Norfolk, VA 23510-1915

Dear Judge Walker:
I am a member of the faculty at the University of New Mexico School of Law, and it is my privilege to recommend Xaveria Mayerhofer for a judicial clerkship. I met and worked closely with Ms. Mayerhofer in Spring 2022, when she excelled as a student in one of my first-year legal writing courses, Elements of Legal Argumentation II. Having worked very closely with Ms. Mayerhofer, I know her well and recommend her enthusiastically for a judicial clerkship.

Ms. Mayerhofer is an outstanding writer. As a student in my legal writing class, Ms. Mayerhofer was required to write briefs both in support of and in opposition to a civil defendant's motion to dismiss for lack of personal jurisdiction. Ms. Mayerhofer excelled in every aspect of both assignments. Her work demonstrated thorough research, a deep understanding of the governing law, and a true mastery of the case and arguments. Ms. Mayerhofer's writing was clear and professional, demonstrating superb editing and proofreading skills. Based on her excellent performance, Ms. Mayerhofer earned an A- in my course, placing her among the top students in the class. More impressively, though, Ms. Mayerhofer's final paper was the best brief I read that semester out of 70 briefs submitted by the 35 students in my two sections. Her arguments were truly exceptional.

Ms. Mayerhofer has also stood out in other ways as a law student. For example, Ms. Mayerhofer earned the CALI Awards for Indian Law Appellate Advocacy and for Constitutional Rights, which is a required course at UNM. Ms. Mayerhofer has also worked as a law clerk for the U.S. Attorney's Office, the Pueblo of Isleta Appellate Court, and the New Mexico State Ethics Commission. This summer, she will serve as a judicial extern for Judge George P. Eichwald of New Mexico's Thirteenth Judicial District Court. By the time that she graduates, Ms. Mayerhofer should be ready to hit the ground running as a judicial clerk.

Finally, Ms. Mayerhofer has the personal characteristics to be an excellent judicial clerk. In my course, Ms. Mayerhofer was always enthusiastic about becoming a better writer and advocate. She was a regular visitor during my office hours, and I quickly discovered that she is a great listener, has an outstanding work ethic, and holds herself to the highest standards. Ms. Mayerhofer has an excellent eye for detail.

Ms. Mayerhofer writing skills, work habits, and personal characteristics make her an outstanding clerkship candidate, and I am honored to recommend her. Please do not hesitate to contact me if you have any questions or would like additional information.

Sincerely,

Scott England
Principal Lecturer & Regents' Lecturer
505.289.6268 (mobile)
scott.england@law.unm.edu

Xaveria Mayerhofer

xmayerhofer@law.unm.edu || (505) 933-0978

This mock dissent for *Students for Fair Admissions, Inc. v. University of North Carolina-Chapel Hill* (No. 21-707) was written for a class in Fall 2022 in which each student was randomly assigned a Supreme Court Justice and, from that Justice's perspective, voted on the case and wrote a correlating opinion. I was assigned Justice Jackson and voted in the minority. This dissent is modeled after the writing style of her circuit court opinions.

Justice Jackson's opinions generally contain the same four sections: (1) Background, (2) Legal Standards, (3) Analysis, and (4) Conclusion. Although there are multiple issues raised by this action, this excerpt focuses solely on the Fourteenth Amendment Equal Protection issue. Here, I have omitted the Background and Conclusion sections and excerpted only the Legal Standard and Analysis sections directly related to the Fourteenth Amendment analysis. This writing sample is unedited by others. Upon request, I am happy to provide the full mock opinion.

I. The Legal Standard of the Fourteenth Amendment Equal Protection Clause

The Fourteenth Amendment prohibits a state, or state actor, from enacting and enforcing discriminatory laws. U.S. Const. amend. XIV, § 1. The Equal Protection Clause of the Fourteenth Amendment states, "No State shall…deny to any person within its jurisdiction the equal protection of the laws." *Id.* There is a three-tiered system of judicial review to determine whether a state law violates the Equal Protection Clause: rational basis review, intermediate scrutiny, and strict scrutiny. *See, e.g.*, *City of Cleburne v. Cleburne Living Ctr.*, 473 U.S. 432, 440, 105 S. Ct. 3249 (1985) (discussing the appropriate standard of judicial review under the Equal Protection Clause). The most deferential form of judicial review is rational basis review. *United States v. Vaello Madero*, 142 S. Ct. 1539, 1543, 212 L. Ed. 2d 496 (2022). Rational basis review applies when a challenged law does not target a suspect or quasi-suspect class. *See Armour v. City of Indianapolis*, 566 U.S. 673, 680-681, 132 S. Ct. 2073 (2012); *City of New Orleans v. Dukes*, 427 U.S. 297, 303-304, 96 S. Ct. 2513 (1976). Next, intermediate review introduces a stricter standard of review for laws that discriminate against a quasi-suspect class; that is, laws that discriminate on the basis of gender or illegitimacy. *See United States v. Virginia*, 518 U.S. 515, 568, 116 S. Ct. 2264 (1996) (Scalia, J., dissenting); *Craig v. Boren*, 429 U.S. 190, 197, 97 S. Ct. 451 (1976). Strict scrutiny, the most stringent form of judicial review, is reserved for laws that discriminate on the basis of race, religion, national origin, or alienage--the suspect classes. *See Fulton v. City of Phila.*, 141 S. Ct. 1868, 1881, 210 L. Ed. 2d 137 (2021); *Grutter v. Bollinger*, 539 U.S. 306, 326-327, 123 S. Ct. 2325 (2003).

Strict scrutiny is required when a law classifies by race because "[d]istinctions between citizens solely because of their ancestry are by their very nature odious to a free people whose institutions are founded upon the doctrine of equality." *Hirabayashi v. United States*, 320 U.S.

81, 100, 63 S. Ct. 1375 (1943). The strict scrutiny standard requires that the government prove the law or policy furthers a compelling government interest, and that the structure of the law or policy is narrowly tailored to achieve the compelling interest. *Brown v. Gov't of the D.C.*, 390 F. Supp. 3d 114, 125 (D.D.C. 2019) (citing *Reed v. Town of Gilbert*, 576 U.S. 155, 170, 135 S. Ct. 2218 (2015)). The government must first establish a legislative goal that is compelling, *Rothe Dev., Inc. v. Dep't of Def.*, 107 F. Supp. 3d 183, 207 (D.D.C. 2015), *aff'd sub nom.*, *Rothe Dev., Inc. v. United States Dep't of Def.*, 836 F.3d 57 (D.C. Cir. 2016); that is, one that "is essential or necessary rather than a matter of choice, preference, or discretion." Ronald Steiner, *Compelling State Interest*, The First Amendment Encyclopedia (2009). After articulating a compelling interest, the government must "show that 'the means chosen to accomplish the government's asserted purpose are specifically and narrowly framed to accomplish that purpose.'" *Rothe Dev. Inc.*, 107 F. Supp. 3d at 208 (quoting *DynaLantic Corp.v. United States Dep't of Def.*, 885 F. Supp. 2d 237, 283 (D.D.C. 2012)). If the government is able to show both that there is a compelling legislative goal and the means chosen to accomplish this goal are specifically and narrowly framed, "the burden shifts to the plaintiff 'to present credible, particularized evidence to rebut the government's initial showing of a compelling interest.'" *Id.* at 207 (quoting *DynaLantic Corp.*, 885 F. Supp. 2d at 251).

The Court has recognized that "remedying the effects of past or present racial discrimination" is a compelling government interest. *DynaLantic Corp.*, 885 F. Supp. 2d at 250. While this is a compelling interest, the government must show "a strong basis in evidence supporting its conclusion that race-based remedial action was necessary to further that interest." *Id*. To assert that remedial action is necessary, "the government need not 'conclusively prove the existence of racial discrimination in the past or present, and the government may rely on both

statistical and anecdotal evidence, although anecdotal evidence alone cannot establish a strong basis in evidence for the purposes of strict scrutiny.'" *Rothe Dev. Inc.*, 107 F. Supp. 3d at 207 (quoting *DynaLantic*, 885 F. Supp. 2d at 250).

The law must also be narrowly tailored. *Rothe Dev. Inc.*, 107 F. Supp. 3d at 192. Narrow tailoring requires a law to be "specifically and narrowly framed to accomplish [the government's] purpose." *Wygant v. Jackson Bd. of Educ.*, 476 U.S. 267, 280, 106 S. Ct. 1842 (1986). To determine whether a race-conscious measure is narrowly tailored, "courts consider several factors…including: '(1) the efficacy of alternative, race-neutral remedies, (2) flexibility, (3) over- or under-inclusiveness of the program, (4) duration, (5) the relationship between numerical goals and the relevant labor market, and (6) the impact of the remedy on third parties.'" *Rothe Dev*, 107 F. Supp. 3d at 208 (quoting *DynaLantic Corp*., 885 F. Supp. 2d at 283). Although the government must show that its policy serves a compelling interest and is narrowly tailored to achieving that interest, "the ultimate burden of proof remains with the challenging party to demonstrate the unconstitutionality of an affirmative-action program.'" *DynaLantic Corp.*, 885 F. Supp. 2d at 251. If the government shows that the race-based measure is narrowly tailored to a compelling government interest, the burden shifts to the plaintiff, who then must provide evidence of the measure's unconstitutionality.

[*I omitted a section here which explained each of the below-referenced cases in detail.*]

From *Brown v. Board of Education of Topeka, Shawnee County, Kansas* in 1954 to *Fisher v. University of Texas at Austin* in 2016, this Court has conducted searching reviews of the use of race in school admissions. *See* 347 U.S. 483, 74 S. Ct. 686 (1954), *supplemented sub nom.*, 349 U.S. 294, 75 S. Ct. 753 (1955); 579 U.S. 365, 136 S. Ct. 2198 (2016). In *Brown*, the Court determined that race could not be a factor used to deny a person access to equal educational

opportunities. 347 U.S. at 495. In *Regents of University of California v. Bakke*, the Court held that the use of race in college admissions decisions is permissible so long as it satisfies strict scrutiny. 438 U.S. 265, 287, 98 S. Ct. 2733 (1978). The Court used the two University of Michigan cases, *Gratz v. Bollinger* and *Grutter v. Bollinger*, to distinguish between policies that violate the Constitution and those that are constitutionally valid. *Gratz*, 539 U.S. 244, 251, 123 S. Ct. 2411 (2003); *Grutter*, 539 U.S. 306, 317, 123 S. Ct. 2325 (2003). The Court held that obtaining a "critical mass" of diverse students by using race as a "plus" factor met the standard of strict scrutiny, whereas a quota system is not narrowly tailored. *Grutter*, 539 U.S. at 334 (finding that the use of race is narrowly tailored when it is a single factor among many and used in a flexible, non-mechanical way); *contra Gratz*, 539 U.S. at 273 (holding that an applicant's race cannot be decisive in an institution's admissions decisions). Finally, in *Fisher I* and *Fisher II*, the Court reiterated its holding that strict scrutiny must be applied to race-based policies. *Fisher v. Univ. of Tex. at Austin*, 570 U.S. 297, 306, 133 S. Ct. 2411 (2013) ("*Fisher I*"); *Fisher v. Univ. of Tex. at Austin*, 579 U.S. 365, 136 S. Ct. 2198 (2016) ("*Fisher II*"). An institution may use race as one factor of the admissions process so long as the institution subjects its race-based policy to an ongoing evaluation of whether the consideration of race continues to be necessary to accomplish the institution's goals. *Compare Fisher I*, 570 U.S. at 315, *with Fisher II*, 579 U.S. at 375. Through this precedent, the Court has established a framework in which universities may accomplish their objectives without violating the constraints of the Fourteenth Amendment.

II. The Admissions Policy of the University of North Carolina-Chapel Hill Comports With The Protections Of The Fourteenth Amendment.

University of North Carolina-Chapel Hill ("UNC") meets the government's burden of showing that its admissions policy serves a compelling government interest and is narrowly tailored to that interest. The admissions application for UNC allows students to optionally

self-report race. (ECF No. 154-7 ¶ 10.) The indication of race, if self-reported, is one of over forty factors in the admissions process. *Students for Fair Admissions, Inc. v. Univ. of N.C.*, 567 F. Supp. 3d 580, 601 (M.D.N.C. 2021), *cert. granted before judgment*, 142 S. Ct. 896 (2022) ("*Students*"). Students for Fair Admission ("SFFA") claims that this optional, self-reported diversity factor violates the Equal Protection Clause of the Fourteenth Amendment. (Compl. ¶ 38.) Specifically, SFFA alleges that UNC's race-conscious admissions policy consists of "intentional[] discriminat[ion]...on the basis of…race, color, or ethnicity in violation of the Fourteenth Amendment." (Compl. ¶ 198.) However, UNC's admissions policy is narrowly tailored to achieve the compelling educational goals of diversity. *Students*, 567 F. Supp. 3d at 588. Therefore, the policy is constitutional.

A. UNC Has Demonstrated That Its Admissions Policy Serves A Compelling Government Interest And Is Narrowly Tailored To Accomplish That Interest.

In each of its on-point cases, the Court has emphasized that strict scrutiny must be used to review any university admissions policy that incorporates race as a factor in its decisions. *See* § II(E) *supra* (omitted here, as stated above). Even outside the realm of education, any law that distinguishes on the basis of race is subject to strict scrutiny. *See, e.g.*, *Grutter*, 539 U.S. at 326 ("All racial classifications imposed by government must be analyzed by a reviewing court under strict scrutiny."). Strict scrutiny "requires the Government to prove that the restriction furthers a compelling interest and is narrowly tailored to achieve that interest." *Reed*, 576 U.S. at 170. A compelling interest "is essential or necessary rather than a matter of choice, preference, or discretion." Steiner, *Compelling State Interest*. The Court has found that an institution's interest in diversity and the educational benefits that flow from diversity are compelling. *Regents of Bakke*, 438 U.S. at 314 ("The interest of diversity is compelling in the context of a university's admissions program."); *Gratz*, 539 U.S. at 325 ("Student body diversity is a compelling state

interest that can justify the use of race in university admissions."). So long as the institution's use of race to achieve its compelling interest in diversity is narrowly tailored, the policy will survive strict scrutiny. *Fisher I*, 570 U.S. at 314 ("The higher education dynamic does not change the narrow tailoring analysis of strict scrutiny.").

A law is narrowly tailored when it is "specifically and narrowly framed to accomplish [the government's] purpose." *Wygant*, 476 U.S. at 280. To determine whether a race-conscious measure in a hiring context is narrowly tailored, courts consider factors such as: "(1) the efficacy of alternative, race-neutral remedies, (2) flexibility, (3) over- or under-inclusiveness of the program, (4) duration, (5) the relationship between numerical goals and the relevant labor market, and (6) the impact of the remedy on third parties." *Rothe Dev*, 107 F. Supp. 3d at 208 (quoting *DynaLantic Corp.*, 885 F. Supp. 2d at 283). Similarly, an inquiry into a race-conscious admissions policy will evaluate whether a race-neutral alternative exists, the university's attempts to limit or eliminate its use of race in admissions decisions, and the expected duration of the race-conscious policy. *See generally*, *Fisher I*, 570 U.S. 297; *Grutter*, 539 U.S. 206.

A race-based admissions policy is permissible under the Fourteenth Amendment, so long as it meets the standards of strict scrutiny. Race is a valid consideration for admissions when it is not part of a prohibited quota system, *Grutter*, 539 U.S. at 334, it is used as one factor among many, *Bakke*, 438 U.S. at 318, and it is not the determinative factor of student admissions. *Fisher II*, 136 S. Ct. at 2212. Additionally, any institution that utilizes racial considerations in its admissions decisions must regularly assess its admissions policy to determine whether the use of race is necessary to achieve its goals of diversity and the benefits that flow from a diverse institutional body. *Id*. at 2209-2210.

UNC's admissions process furthers the compelling interests of diversity and the educational benefits that flow from diversity, and its policy is narrowly tailored to achieve those interests. First, UNC has a compelling interest in diversity and the benefits that stem from a diverse student body. *See Students*, 567 F. Supp. 3d at 588. SFFA, on the whole, does not claim that UNC lacks compelling interests in diversity and the educational benefits that flow from it. *See id*. Transcript of Oral Argument at 9, *Students for Fair Admissions, Inc. v. Univ. of N.C.* (2022) (No. 21-707) (henceforth "Oral Argument") (SFFA attorney affirming that "remediation is an acceptable compelling interest"); *id*. at 59 (SFFA attorney acknowledging that universities have an interest in diversity and its educational benefits). UNC's interest in racial diversity is to create the next generation of leaders, to promote the research and scholarship of diverse students, to foster mutually beneficial interactions between diverse peoples, and in other benefits that flow from educational diversity. *Students*, 567 F. Supp. 3d at 588-589. Since 1978, this Court has recognized that diversity and the educational benefits that flow from diversity are compelling interests. *Bakke*, 438 U.S. at 314. Because UNC's use of race in its admissions policy serves a compelling interest, the policy must be upheld so long as it is narrowly tailored.

Second, UNC's admissions policy is narrowly tailored to its goals of diversity. SFFA asserts that UNC's policy is not narrowly tailored because it does not use race as a mere "plus" factor, (Compl. ¶ 198), each applicant is not evaluated as an individual, (Compl. ¶ 199), race is a defining feature of applications to UNC, (Compl. ¶ 199), and UNC could meet its diversity goals without utilizing a race-conscious admissions policy. (Compl. ¶ 206.) UNC rebuts these assertions by providing evidence that race is one of over forty possible "plus" factors and that the weight of such "plus" factors is only determined in the holistic context of the application, thereby allowing UNC admissions officers to consider each applicant as an individual. *Students*, 567 F.

Supp. 3d at 595, 601. UNC also offered evidence that race is not a defining feature of any application, *id.*, that race is only influential in 1-2% of decisions, Oral Argument at 91-92, and that there are no separate admissions processes for applicants on the basis of race. *Students*, 567 F. Supp. 3d at 595. In so doing, UNC has delineated itself from the unconstitutional policies in *Bakke* and *Gratz*. Finally, UNC has refuted SFFA's claims by providing detailed expert analysis and testimony to demonstrate first, that it has made good faith efforts to find a race-neutral means of achieving the same goals and, second, that no alternative policy could achieve its goals without sacrificing the institution's diversity, its academic excellence, or both. *Students*, 567 F. Supp. 3d at 666. UNC's use of race in its admissions policy is narrowly tailored to UNC's compelling interests. UNC has demonstrated the efficiency and flexibility of its current policy as well as its continuing good faith efforts to find a race-neutral alternative. *Students*, 567 F. Supp. 3d at 666. This Court has held that "[t]he fact that race consciousness played a role in only a small portion of admissions decisions should be a hallmark of narrow tailoring, not evidence of unconstitutionality." *Fisher II*, 579 U.S. at 384-85. Likewise, here, UNC's minimal use of race in its decisions is a hallmark of UNC's narrowly tailored race-conscious policy. *Students*, 567 F. Supp. 3d at 634. To determine whether a race-neutral alternative exists, both parties retained qualified experts[1] who testified and provided reports on the efficacy of numerous race-neutral alternatives. *Students*, 567 F. Supp. 3d at 612-613. Thorough explorations of alternative admissions schemes demonstrate that no race-neutral alternative would achieve the same goals of diversity in a comparable manner. *Id.* at 648 ("None of the models before [the Court] from either party would be viable in reproducing the educational benefits of diversity about as well as a

[1] SFFA's expert, Professor Arcidiacono, has a Ph.D. in economics, specializes in empirical models, and has been a researcher and professor for over twenty years. *Students*, 567 F. Supp. 3d at 612. UNC's expert, Professor Hoxby, has a Ph.D. in economics, specializes in the economics of education, and is an award-winning researcher. *Id*. at 613.

race-conscious admissions policy.").[2] The lack of an explicit endpoint does not change the fact that UNC's policy is narrowly tailored. While race is not meant to be used in admissions considerations permanently, this Court has not required institutions to cite definitive endpoints. *Fisher II*, 136 S. Ct. at 2209-10. Instead, periodic assessments of an institution's progress are sufficient to demonstrate its commitment to ending its race-conscious policy once its goals have been met. *Id*. Here, as in this Court's precedent, UNC has not cited a specific endpoint, either in terms of a date or in terms of student body enrollment. *Students*, 567 F. Supp. 3d at 610. Instead, UNC conducts periodic assessments of its progress in achieving student body diversity. *Id.* at 612. So long as it continues to do so, UNC will meet the requirement to conduct good faith attempts to implement a race-neutral alternative to its current policy. Because UNC's use of race in its admissions policy is narrowly tailored to achieving the compelling interests of student body diversity and the benefits that flow from diversity, UNC's admissions policy satisfies the requirements of the Equal Protection Clause.

B. UNC's Admissions Policy Satisfies Strict Scrutiny And Serves The Legislative Purpose Of The Fourteenth Amendment.

[The paragraphs containing an explanation and analysis of the history and intent of the Fourteenth Amendment have been omitted.]

Despite efforts, like those at UNC, to rectify the nation's history of discrimination "much progress remains to be made in our Nation's continuing struggle against racial isolation." *Tex. Dep't of Hous. & Cmty. Affs. v. Inclusive Cmtys. Project, Inc.*, 576 U.S. 519, 546, 135 S. Ct. 2507 (2015). Race, therefore, "may be considered in certain circumstances and in a proper fashion" to achieve the goals of the Fourteenth Amendment. *Id*. at 545. When a policy is narrowly tailored to

[2] In the trial court, the parties and their respective experts presented over 100 race-neutral alternatives. These alternatives included various formulations placing greater emphasis on socioeconomic factors, percentage plans, community-based preferences, geography, and student-teacher ratios, to name a few. Each alternative lowered UNC's racial minority enrollment, its standards of academic excellence, or both. *Students*, 567 F. Supp. 3d at 640.

achieving the intent, promise, and legacy of the Fourteenth Amendment, the consideration of race is not only constitutionally permissible, but constitutionally endorsed. UNC's race-conscious admissions policy is narrowly tailored to serve its compelling interests in diversity, and it furthers the original intent of the Fourteenth Amendment. Accordingly, I concur with the District Court's conclusion that the strict scrutiny standard has been met, that UNC's admissions policy is facially constitutional, despite its reliance on race-conscious criteria, and that race-conscious policies, such as UNC's, are within the contemplated effects of the Fourteenth Amendment.